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Flight Data Report No. 6

Contract AF 33(616)-7633

BALLOON FLIGHT OF JULY 5, 1962

David G. Murcraay
James N. Brooks
Jay O. Green
Marie M. Working

Research Reported in This Document Has Been Supported by
Aeronautical Systems Division
Air Force Systems Command
United States Air Force

15 March 1963

- Submitted by -

Denver Research Institute
University of Denver
Denver 10, Colorado



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207	IR Number of Observations as a Function of Scattering Angle	411
208	IR Mean Radiance as a Function of Scattering Angle	412
209	IR RMS Fluctuation as a Function of Scattering Angle	413
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ABSTRACT

This report presents the results obtained on a balloon flight made with an automatic programmed radiometer system. The equipment was launched from Ft. Wainwright, Alaska, July 5, 1962. The radiometer was equipped with a liquid oxygen cooled InSb cell as a detector and measurements were made of the infrared background radiation in various wavelength intervals between 1.8μ to 5.0μ .

I. INTRODUCTION

This is one of a continuing series of flight data reports issued on Contract AF 33(616)-7633. These reports present infrared and ultraviolet background radiation data obtained by means of a balloon borne automatic programmed radiometer system. The results contained in this report were obtained during a balloon flight made from Ft. Wainwright, Alaska, July 5, 1962.

II. INSTRUMENTATION

The instrumentation has been described in detail in previous flight data reports and the description will not be repeated here. For this flight the plane mirror located at the front aperture of the radiometer was programmed so that the radiometer scanned through 180° in azimuth at a constant elevation angle. At the end of this scan the azimuth drive was reversed and at the same time the elevation mirror was rotated to a different position. Thus a series of scans were made in azimuth at different elevation angles. At the end of five azimuth scans the filter wheel was advanced and the sequence repeated. The filters used on this flight were the same as those used on previous flights. In order to keep this report self-contained the filter transmission curves are given in Figures 1 through 5.

The method of calibration of the radiometer system is described in detail in flight data report Number 4.

III. FLIGHT DETAILS

The balloon was launched from Ft. Wainwright, Alaska (at the edge of Fairbanks) at 0830 Alaska Standard Time. The balloon ascended at an average rate of 220 meters/min and reached a floating altitude of 31 kms. The winds were such that the balloon drifted to the east during the early part of the ascent and then to the west during the latter part of the ascent. The winds at float were also from the east and when

the flight was terminated at 1400 the equipment impacted about five miles east of Nenana close to the Tanana River. The equipment was recovered by means of a helicopter.

There was high cirrus present throughout the flight with some cumulus buildup occurring after 1000. No data are available on the height of the cirrus other than a report by a commercial aircraft that the cirrus in the vicinity of Fairbanks was above 6 kms.

IV. RESULTS

The instrumentation operated properly with the exception of the amplifier used with the photomultiplier tube on the ultraviolet channel. A transistor in this unit failed early in the flight and no data were obtained concerning the ultraviolet background radiation.

For this flight a method of data presentation, suggested by H. W. Wessely of the Aerospace Corporation, has been used. Rather than calculating the probability distribution functions for the radiance and the gradient of the radiance, the mean radiance and the r.m.s. radiance were calculated as a function of a number of parameters. The mean value of the radiance was calculated as a function of azimuth angle from the sun and viewing angle. The r.m.s. value of the radiance was also determined for the same parameters. The mean radiance and r.m.s. value of the radiance were also determined as a function of scattering angle and viewing angle. The number of observations on which these data are based are also given. In presenting the results as a function of sun azimuth the mean radiance and r.m.s. radiance were determined as a function of sun azimuth to the right of the sun and to the left of the sun separately and these results are presented along with a weighted average of the two values. These results are presented in Figures 6 through 227. For purposes of this report a viewing angle of 90° corresponds to the balloon horizon and a viewing angle of 0° corresponds to the nadir. All radiance values quoted are in microwatts cm^{-2} steradian $^{-1}$ and represent the radiance passed by the filter.

Due to a number of changes that had been made in the instrumentation prior to this flight the internal black body temperature ran about 10°C higher than previously. As a result of this higher temperature and the small amount of radiation reaching the radiometer in the wavelengths passed by filter 11 (4.3 μ CO. band) the detector output was off scale in the negative direction when this filter was in front of the detector and no data were obtained with this filter. Filter 12 is an opaque plug and is used to check the instrument noise level. The noise level remained constant throughout the flight.

V. ERRATA

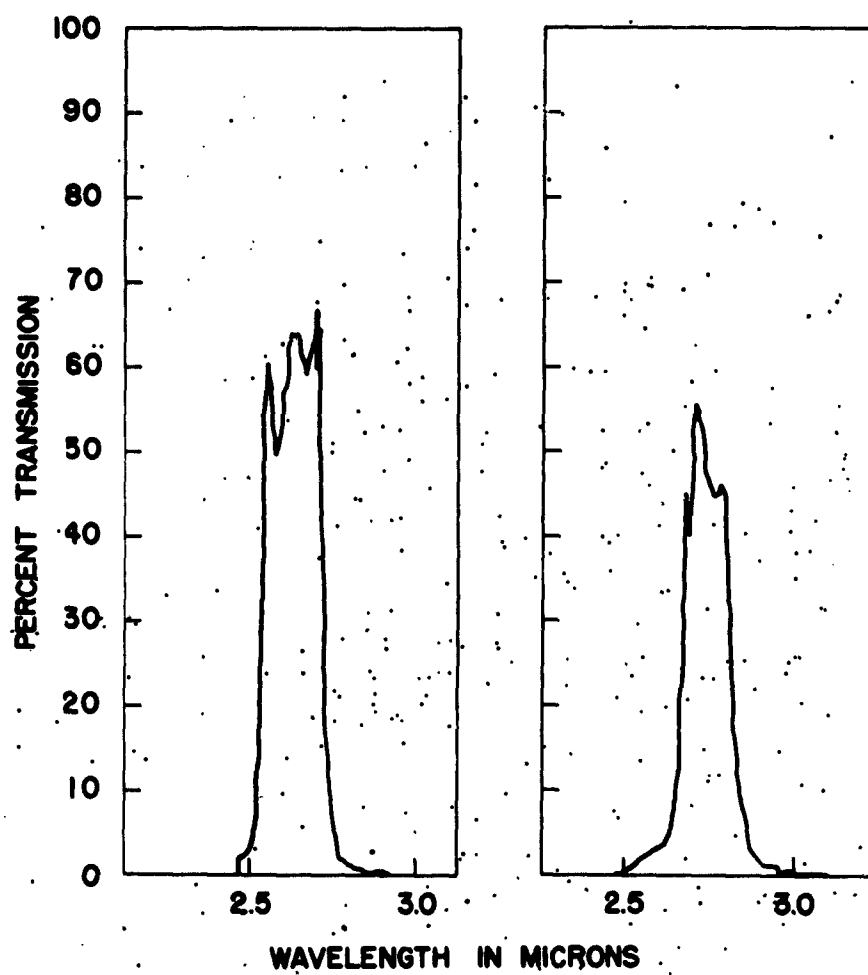
Flight Data Report No. 5:

Figure 1 Page 4 IR Filter No. 2 should read:

IR Filter No. 4

Figure 2 Page 5 IR Filter No. 4 should read:

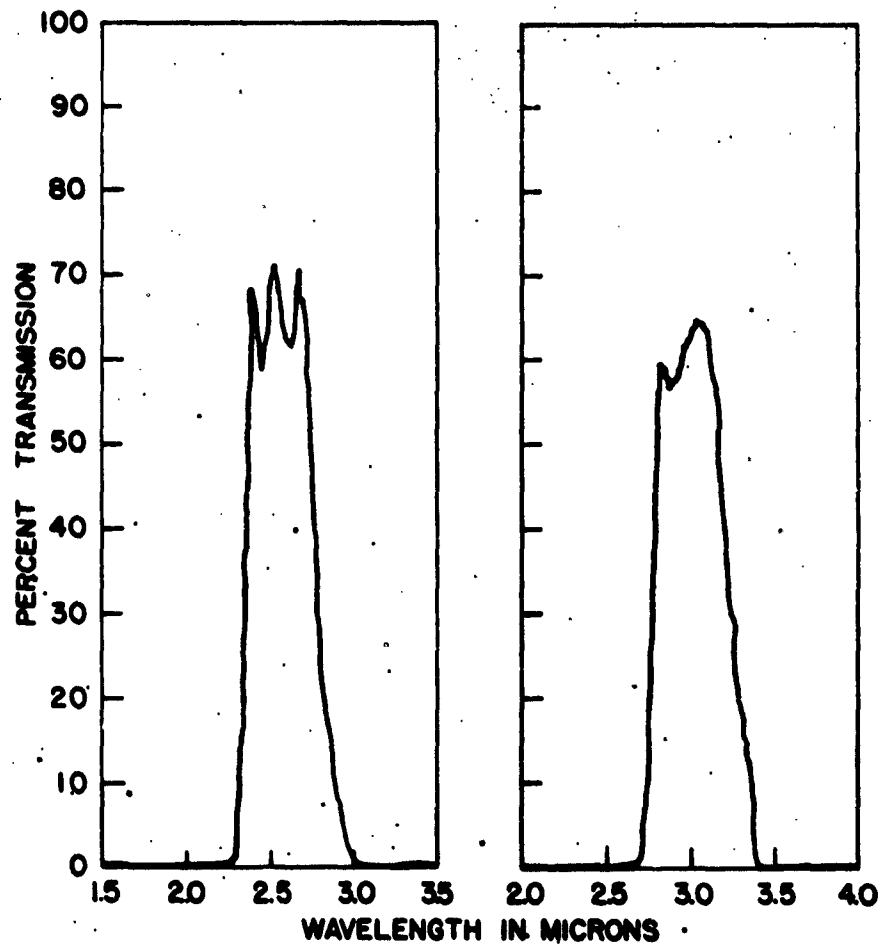
IR Filter No. 2



IR Filter Nos. 1, 6

IR Filter Nos. 2, 7

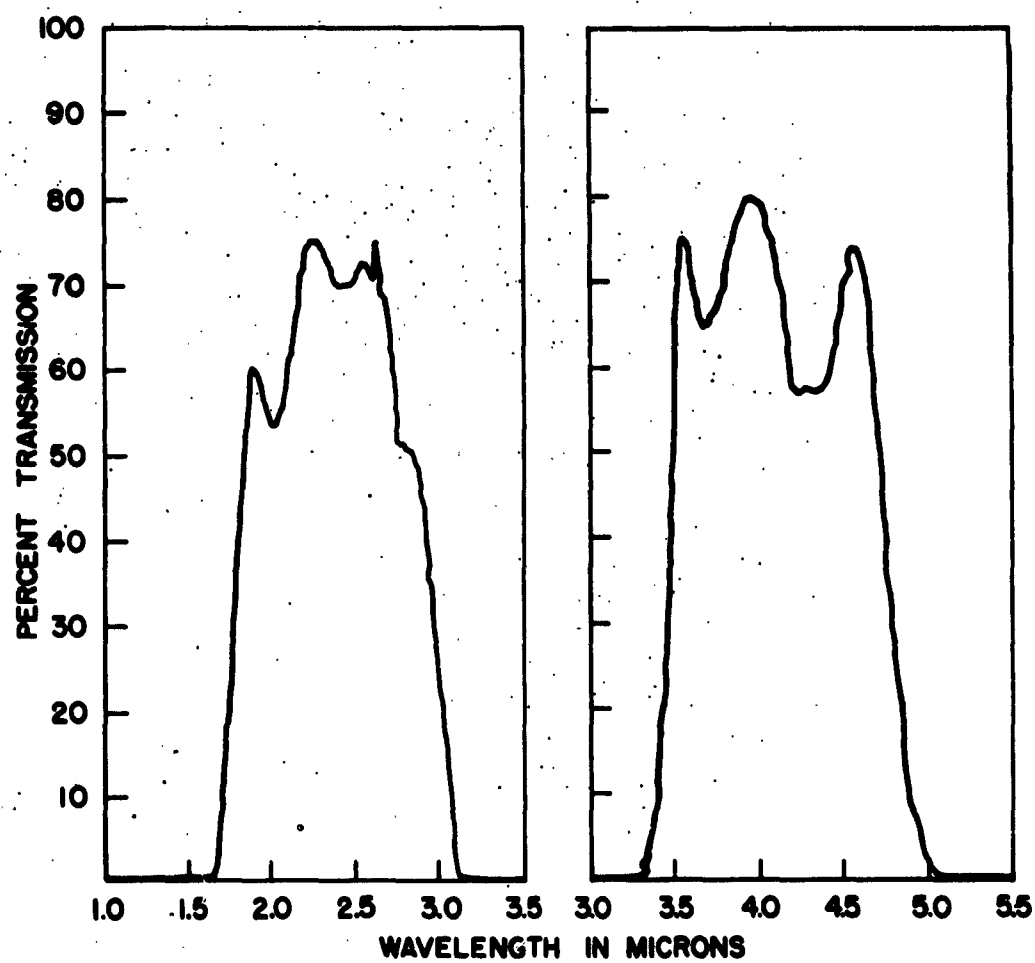
Figure 1



IR Filter No. 3

IR Filter No. 4

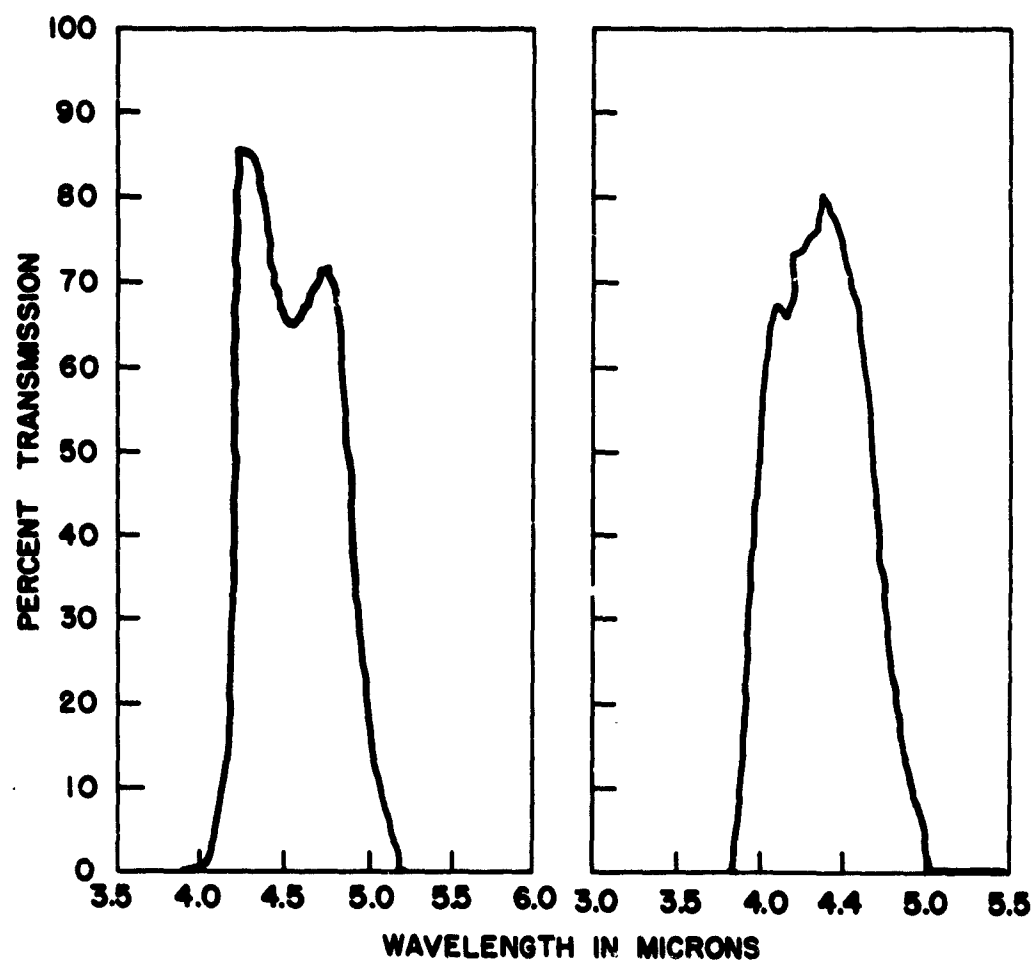
Figure 2



IR Filter No. 5

IR Filter No. 8

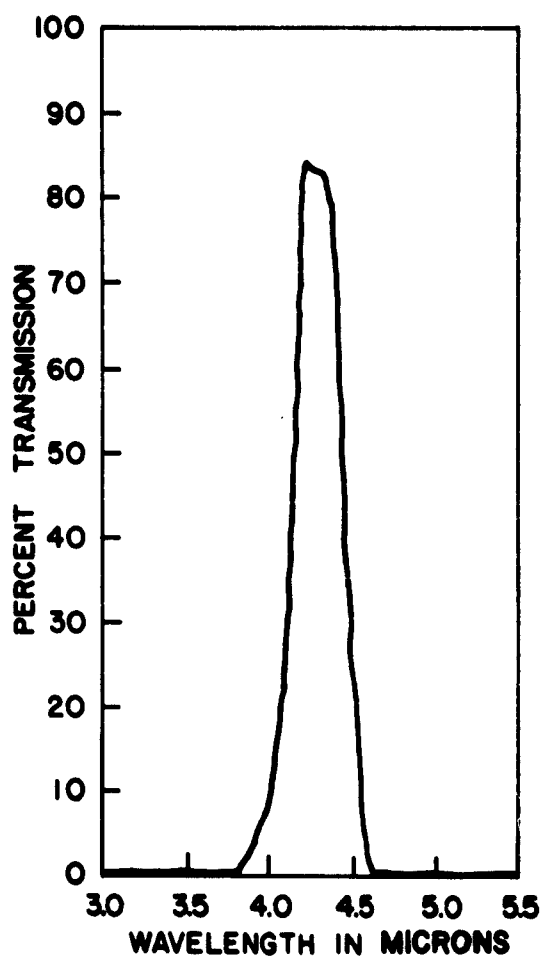
Figure 3



IR Filter No. 9

IR Filter No. 10

Figure 4



IR Filter No. 11

Figure 5

IR NUMBER OF OBSERVATIONS AS A FUNCTION OF SUN AZIMUTH

FILTER 6 AT 1000 AST INSOL ANGLE 45.7 DEG
SPECTRAL BAND 2.50 TO 2.78 MICRONS ELEVATION 17.2 KM

VA	0	10	20	30	40	50	60	70	80	90
SA										
R	0.	0.	0.	0.	0.	0.	135.	60.	0.	0.
0 A	0.	0.	0.	0.	0.	0.	120.	90.	0.	0.
L	0.	0.	0.	0.	0.	0.	105.	120.	0.	0.
R	0.	0.	0.	0.	0.	0.	180.	240.	0.	0.
10 A	0.	0.	0.	0.	0.	0.	195.	210.	0.	0.
L	0.	0.	0.	0.	0.	0.	209.	180.	0.	0.
R	0.	0.	0.	0.	0.	0.	75.	135.	0.	0.
20 A	0.	0.	0.	0.	0.	0.	143.	143.	0.	0.
L	0.	0.	0.	0.	0.	0.	210.	150.	0.	0.
R	0.	0.	0.	0.	75.	0.	0.	135.	0.	0.
30 A	0.	0.	0.	0.	38.	0.	82.	143.	0.	0.
L	0.	0.	0.	0.	0.	0.	164.	150.	0.	0.
R	0.	0.	0.	0.	210.	0.	0.	210.	0.	0.
40 A	0.	0.	0.	0.	105.	0.	105.	105.	0.	0.
L	0.	0.	0.	0.	0.	0.	210.	0.	0.	0.
R	0.	0.	0.	0.	180.	0.	0.	210.	0.	0.
50 A	0.	0.	0.	0.	90.	0.	113.	105.	0.	0.
L	0.	0.	0.	0.	0.	0.	225.	0.	0.	0.
R	0.	0.	0.	0.	164.	0.	0.	195.	0.	0.
60 A	0.	0.	0.	0.	82.	0.	113.	98.	0.	0.
L	0.	0.	0.	0.	0.	0.	225.	0.	0.	0.

RADIANCE VALUES ARE IN MICROWATTS. VA AND SA ARE IN DEGREES.

FIGURE 6

IR NUMBER OF OBSERVATIONS AS A FUNCTION OF SUN AZIMUTH

FILTER 6 AT 1000 AST INSOL ANGLE 45.7 DEG
SPECTRAL BAND 2.50 TO 2.78 MICRONS ELEVATION 17.2 KM

VA SA	0	10	20	30	40	50	60	70	80	90
R	0.	0.	0.	0.	210.	0.	0.	180.	0.	0.
70 A	0.	0.	0.	0.	105.	0.	68.	90.	0.	0.
L	0.	0.	0.	0.	0.	0.	135.	0.	0.	0.
R	0.	0.	0.	0.	195.	0.	0.	180.	0.	0.
80 A	0.	0.	0.	0.	98.	0.	90.	90.	0.	0.
L	0.	0.	0.	0.	0.	0.	180.	0.	0.	0.
R	0.	0.	0.	0.	195.	0.	0.	210.	0.	0.
90 A	0.	0.	0.	0.	98.	0.	113.	105.	0.	0.
L	0.	0.	0.	0.	0.	0.	225.	0.	0.	0.
R	0.	0.	0.	0.	195.	0.	0.	180.	0.	0.
100 A	0.	0.	0.	0.	98.	0.	90.	90.	0.	0.
L	0.	0.	0.	0.	0.	0.	180.	0.	0.	0.
R	0.	0.	0.	0.	135.	0.	0.	135.	0.	0.
110 A	0.	0.	0.	0.	68.	0.	90.	68.	0.	0.
L	0.	0.	0.	0.	0.	0.	180.	0.	0.	0.
R	0.	0.	0.	0.	195.	0.	0.	135.	0.	0.
120 A	0.	0.	0.	0.	98.	0.	45.	68.	0.	0.
L	0.	0.	0.	0.	0.	0.	90.	0.	0.	0.

RADIANCE VALUES ARE IN MICROWATTS. VA AND SA ARE IN DEGREES.

FIGURE 6 CONT.

IR NUMBER OF OBSERVATIONS AS A FUNCTION OF SUN AZIMUTH

FILTER 6 AT 1000 AST INSOL ANGLE 45.7 DEG
SPECTRAL BAND 2.50 TO 2.78 MICRONS ELEVATION 17.2 KM

VA SA	0	10	20	30	40	50	60	70	80	90
R	0.	0.	0.	0.	209.	0.	0.	209.	0.	0.
130 A	0.	0.	0.	0.	105.	0.	0.	105.	0.	0.
L	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
R	0.	0.	0.	0.	225.	0.	0.	180.	0.	0.
140 A	0.	0.	0.	0.	113.	0.	0.	90.	0.	0.
L	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
R	0.	0.	0.	0.	180.	0.	0.	225.	0.	0.
150 A	0.	0.	0.	0.	90.	0.	0.	113.	0.	0.
L	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
R	0.	0.	0.	0.	164.	0.	0.	180.	0.	0.
160 A	0.	0.	0.	0.	82.	0.	0.	90.	0.	0.
L	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
R	0.	0.	0.	0.	165.	0.	0.	180.	0.	0.
170 A	0.	0.	0.	0.	83.	0.	0.	90.	0.	0.
L	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
R	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
180 A	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
L	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.

RADIANCE VALUES ARE IN MICROWATTS. VA AND SA ARE IN DEGREES.

FIGURE 6 CONT.

IR MEAN RADIANCE AS A FUNCTION OF SUN AZIMUTH

FILTER 6 AT 1000 AST INSOL ANGLE 45.7 DEG
SPECTRAL BAND 2.50 TO 2.78 MICRONS ELEVATION 17.2 KM

VA	0	10	20	30	40	50	60	70	80	90
SA										
R	0.	0.	0.	0.	0.	0.	0.14	0.59	0.	0.
0 A	0.	0.	0.	0.	0.	0.	0.14	0.60	0.	0.
L	0.	0.	0.	0.	0.	0.	0.14	0.60	0.	0.
R	0.	0.	0.	0.	0.	0.	0.16	0.48	0.	0.
10 A	0.	0.	0.	0.	0.	0.	0.16	0.53	0.	0.
L	0.	0.	0.	0.	0.	0.	0.15	0.60	0.	0.
R	0.	0.	0.	0.	0.	0.	0.17	0.25	0.	0.
20 A	0.	0.	0.	0.	0.	0.	0.16	0.31	0.	0.
L	0.	0.	0.	0.	0.	0.	0.16	0.36	0.	0.
R	0.	0.	0.	0.	0.22	0.	0.	0.25	0.	0.
30 A	0.	0.	0.	0.	0.22	0.	0.20	0.26	0.	0.
L	0.	0.	0.	0.	0.	0.	0.20	0.27	0.	0.
R	0.	0.	0.	0.	0.21	0.	0.	0.38	0.	0.
40 A	0.	0.	0.	0.	0.21	0.	0.21	0.38	0.	0.
L	0.	0.	0.	0.	0.	0.	0.21	0.	0.	0.
R	0.	0.	0.	0.	0.57	0.	0.	0.27	0.	0.
50 A	0.	0.	0.	0.	0.57	0.	0.28	0.27	0.	0.
L	0.	0.	0.	0.	0.	0.	0.28	0.	0.	0.
R	0.	0.	0.	0.	0.43	0.	0.	0.64	0.	0.
60 A	0.	0.	0.	0.	0.43	0.	0.19	0.64	0.	0.
L	0.	0.	0.	0.	0.	0.	0.19	0.	0.	0.

RADIANCE VALUES ARE IN MICROWATTS. VA AND SA ARE IN DEGREES.

FIGURE 7

IR MEAN RADIANCE AS A FUNCTION OF SUN AZIMUTH

FILTER 6 AT 1000 AST INSOL ANGLE 45.7 DEG
SPECTRAL BAND 2.50 TO 2.78 MICRONS ELEVATION 17.2 KM

VA	0	10	20	30	40	50	60	70	80	90
SA										
R	0.	0.	0.	0.	0.45	0.	0.	0.41	0.	0.
70 A	0.	0.	0.	0.	0.45	0.	0.40	0.41	0.	0.
L	0.	0.	0.	0.	0.	0.	0.40	0.	0.	0.
R	0.	0.	0.	0.	0.23	0.	0.	0.58	0.	0.
80 A	0.	0.	0.	0.	0.23	0.	0.47	0.58	0.	0.
L	0.	0.	0.	0.	0.	0.	0.47	0.	0.	0.
R	0.	0.	0.	0.	0.20	0.	0.	1.24	0.	0.
90 A	0.	0.	0.	0.	0.20	0.	0.51	1.24	0.	0.
L	0.	0.	0.	0.	0.	0.	0.51	0.	0.	0.
R	0.	0.	0.	0.	0.17	0.	0.	0.71	0.	0.
100 A	0.	0.	0.	0.	0.17	0.	0.41	0.71	0.	0.
L	0.	0.	0.	0.	0.	0.	0.41	0.	0.	0.
R	0.	0.	0.	0.	0.19	0.	0.	0.91	0.	0.
110 A	0.	0.	0.	0.	0.19	0.	0.14	0.91	0.	0.
L	0.	0.	0.	0.	0.	0.	0.14	0.	0.	0.
R	0.	0.	0.	0.	0.16	0.	0.	0.82	0.	0.
120 A	0.	0.	0.	0.	0.16	0.	0.13	0.82	0.	0.
L	0.	0.	0.	0.	0.	0.	0.13	0.	0.	0.

RADIANCE VALUES ARE IN MICROWATTS. VA AND SA ARE IN DEGREES.

FIGURE 7 CONT.

IR MEAN RADIANCE AS A FUNCTION OF SUN AZIMUTH

FILTER 6 AT 1000 AST INSOL ANGLE 45.7 DEG
SPECTRAL BAND 2.50 TO 2.78 MICRONS ELEVATION 17.2 KM

	VA	0	10	20	30	40	50	60	70	80	90
SA											
	R	0.	0.	0.	0.	0.15	0.	0.	0.63	0.	0.
130	A	0.	0.	0.	0.	0.15	0.	0.	0.63	0.	0.
	L	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
	R	0.	0.	0.	0.	0.16	0.	0.	0.56	0.	0.
140	A	0.	0.	0.	0.	0.16	0.	0.	0.56	0.	0.
	L	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
	R	0.	0.	0.	0.	0.29	0.	0.	0.41	0.	0.
150	A	0.	0.	0.	0.	0.29	0.	0.	0.41	0.	0.
	L	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
	R	0.	0.	0.	0.	0.16	0.	0.	0.29	0.	0.
160	A	0.	0.	0.	0.	0.16	0.	0.	0.29	0.	0.
	L	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
	R	0.	0.	0.	0.	0.25	0.	0.	0.53	0.	0.
170	A	0.	0.	0.	0.	0.25	0.	0.	0.53	0.	0.
	L	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
	R	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
180	A	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
	L	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.

RADIANCE VALUES ARE IN MICROWATTS. VA AND SA ARE IN DEGREES.

FIGURE 7 CONT.

IR RMS FLUCTUATION AS A FUNCTION OF SUN AZIMUTH

FILTER 6 AT 1000 AST INSOL ANGLE 45.7 DEG
SPECTRAL BAND 2.50 TO 2.78 MICRONS ELEVATION 17.2 KM

VA	0	10	20	30	40	50	60	70	80	90
SA										
R	0.	0.	0.	0.	0.	0.	0.12	0.21	0.	0.
0 A	0.	0.	0.	0.	0.	0.	0.17	0.29	0.	0.
L	0.	0.	0.	0.	0.	0.	0.13	0.20	0.	0.
R	0.	0.	0.	0.	0.	0.	0.13	0.21	0.	0.
10 A	0.	0.	0.	0.	0.	0.	0.18	0.32	0.	0.
L	0.	0.	0.	0.	0.	0.	0.13	0.25	0.	0.
R	0.	0.	0.	0.	0.	0.	0.11	0.17	0.	0.
20 A	0.	0.	0.	0.	0.	0.	0.16	0.27	0.	0.
L	0.	0.	0.	0.	0.	0.	0.12	0.21	0.	0.
R	0.	0.	0.	0.	0.16	0.	0.	0.17	0.	0.
30 A	0.	0.	0.	0.	0.16	0.	0.15	0.23	0.	0.
L	0.	0.	0.	0.	0.	0.	0.15	0.16	0.	0.
R	0.	0.	0.	0.	0.15	0.	0.	0.22	0.	0.
40 A	0.	0.	0.	0.	0.15	0.	0.14	0.22	0.	0.
L	0.	0.	0.	0.	0.	0.	0.14	0.	0.	0.
R	0.	0.	0.	0.	0.26	0.	0.	0.15	0.	0.
50 A	0.	0.	0.	0.	0.26	0.	0.18	0.15	0.	0.
L	0.	0.	0.	0.	0.	0.	0.18	0.	0.	0.
R	0.	0.	0.	0.	0.19	0.	0.	0.45	0.	0.
60 A	0.	0.	0.	0.	0.19	0.	0.14	0.45	0.	0.
L	0.	0.	0.	0.	0.	0.	0.14	0.	0.	0.

RADIANCE VALUES ARE IN MICROWATTS. VA AND SA ARE IN DEGREES.

FIGURE 8

IR RMS FLUCTUATION AS A FUNCTION OF SUN AZIMUTH

FILTER 6 AT 1000 AST INSOL ANGLE 45.7 DEG
SPECTRAL BAND 2.50 TO 2.78 MICRONS ELEVATION 17.2 KM

VA	0	10	20	30	40	50	60	70	80	90
SA										
R	0.	0.	0.	0.	0.21	0.	0.	0.21	0.	0.
70 A	0.	0.	0.	0.	0.21	0.	0.24	0.21	0.	0.
L	0.	0.	0.	0.	0.	0.	0.24	0.	0.	0.
R	0.	0.	0.	0.	0.15	0.	0.	0.27	0.	0.
80 A	0.	0.	0.	0.	0.15	0.	0.19	0.27	0.	0.
L	0.	0.	0.	0.	0.	0.	0.19	0.	0.	0.
R	0.	0.	0.	0.	0.13	0.	0.	0.36	0.	0.
90 A	0.	0.	0.	0.	0.13	0.	0.19	0.36	0.	0.
L	0.	0.	0.	0.	0.	0.	0.19	0.	0.	0.
R	0.	0.	0.	0.	0.12	0.	0.	0.34	0.	0.
100 A	0.	0.	0.	0.	0.12	0.	0.18	0.34	0.	0.
L	0.	0.	0.	0.	0.	0.	0.18	0.	0.	0.
R	0.	0.	0.	0.	0.13	0.	0.	0.22	0.	0.
110 A	0.	0.	0.	0.	0.13	0.	0.11	0.22	0.	0.
L	0.	0.	0.	0.	0.	0.	0.11	0.	0.	0.
R	0.	0.	0.	0.	0.12	0.	0.	0.21	0.	0.
120 A	0.	0.	0.	0.	0.12	0.	0.11	0.21	0.	0.
L	0.	0.	0.	0.	0.	0.	0.11	0.	0.	0.

RADIANCE VALUES ARE IN MICROWATTS. VA AND SA ARE IN DEGREES.

FIGURE 8 CONT.

IR RMS FLUCTUATION AS A FUNCTION OF SUN AZIMUTH

FILTER 6 AT 1000 AST INSOL ANGLE 45.7 DEG
SPECTRAL BAND 2.50 TO 2.78 MICRONS ELEVATION 17.2 KM

	VA	0	10	20	30	40	50	60	70	80	90
SA											
R	0.	0.	0.	0.	0.	0.12	0.	0.	0.18	0.	0.
130 A	0.	0.	0.	0.	0.	0.12	0.	0.	0.18	0.	0.
L	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
R	0.	0.	0.	0.	0.	0.12	0.	0.	0.19	0.	0.
140 A	0.	0.	0.	0.	0.	0.12	0.	0.	0.19	0.	0.
L	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
R	0.	0.	0.	0.	0.	0.20	0.	0.	0.18	0.	0.
150 A	0.	0.	0.	0.	0.	0.20	0.	0.	0.18	0.	0.
L	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
R	0.	0.	0.	0.	0.	0.13	0.	0.	0.16	0.	0.
160 A	0.	0.	0.	0.	0.	0.13	0.	0.	0.16	0.	0.
L	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
R	0.	0.	0.	0.	0.	0.17	0.	0.	0.38	0.	0.
170 A	0.	0.	0.	0.	0.	0.17	0.	0.	0.38	0.	0.
L	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
R	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
180 A	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
L	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.

RADIANCE VALUES ARE IN MICROWATTS. VA AND SA ARE IN DEGREES.

FIGURE 8 CONT.

IR NUMBER OF OBSERVATIONS AS A FUNCTION OF SCATTERING ANGLE

FILTER 6 AT 1000 AST INSOL ANGLE 45.7 DEG
SPECTRAL BAND 2.50 TO 2.78 MICRONS ELEVATION 17.2 KM

VA SA	0	10	20	30	40	50	60	70	80	90
0	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
10	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
20	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
30	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
40	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
50	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
60	0.	0.	0.	0.	0.	0.	0.	765.	0.	0.
70	0.	0.	0.	0.	0.	0.	0.	645.	0.	0.
80	0.	0.	0.	0.	0.	0.	1243.	345.	0.	0.
90	0.	0.	0.	0.	60.	0.	480.	300.	0.	0.
100	0.	0.	0.	0.	509.	0.	270.	300.	0.	0.
110	0.	0.	0.	0.	405.	0.	300.	210.	0.	0.
120	0.	0.	0.	0.	315.	0.	255.	195.	0.	0.
130	0.	0.	0.	0.	270.	0.	180.	284.	0.	0.
140	0.	0.	0.	0.	270.	0.	0.	315.	0.	0.
150	0.	0.	0.	0.	329.	0.	0.	420.	0.	0.
160	0.	0.	0.	0.	225.	0.	0.	0.	0.	0.
170	0.	0.	0.	0.	314.	0.	0.	0.	0.	0.
180	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.

RADIANCE VALUES ARE IN MICROWATTS. VA AND SA ARE IN DEGREES.

FIGURE 9

IR MEAN RADIANCE AS A FUNCTION OF SCATTERING ANGLE

FILTER 6 AT 1000 AST INSOL ANGLE 45.7 DEG
SPECTRAL BAND 2.50 TO 2.78 MICRONS ELEVATION 17.2 KM

VA SA	0	10	20	30	40	50	60	70	80	90
0	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
10	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
20	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
30	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
40	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
50	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
60	0.	0.	0.	0.	0.	0.	0.	0.48	0.	0.
70	0.	0.	0.	0.	0.	0.	0.	0.33	0.	0.
80	0.	0.	0.	0.	0.	0.	0.17	0.37	0.	0.
90	0.	0.	0.	0.	0.23	0.	0.23	0.53	0.	0.
100	0.	0.	0.	0.	0.38	0.	0.43	1.07	0.	0.
110	0.	0.	0.	0.	0.37	0.	0.49	0.75	0.	0.
120	0.	0.	0.	0.	0.20	0.	0.31	0.89	0.	0.
130	0.	0.	0.	0.	0.18	0.	0.14	0.64	0.	0.
140	0.	0.	0.	0.	0.15	0.	0.	0.49	0.	0.
150	0.	0.	0.	0.	0.16	0.	0.	0.40	0.	0.
160	0.	0.	0.	0.	0.26	0.	0.	0.	0.	0.
170	0.	0.	0.	0.	0.21	0.	0.	0.	0.	0.
180	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.

RADIANCE VALUES ARE IN MICROWATTS. VA AND SA ARE IN DEGREES.

FIGURE 10

IR RMS FLUCTUATION AS A FUNCTION OF SCATTERING ANGLE

FILTER 6 AT 1000 AST INSOL ANGLE 45.7 DEG
SPECTRAL BAND 2.50 TO 2.78 MICRONS ELEVATION 17.2 KM

VA	0	10	20	30	40	50	60	70	80	90
SA										
0	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
10	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
20	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
30	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
40	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
50	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
60	0.	0.	0.	0.	0.	0.	0.	0.25	0.	0.
70	0.	0.	0.	0.	0.	0.	0.	0.20	0.	0.
80	0.	0.	0.	0.	0.	0.	0.13	0.24	0.	0.
90	0.	0.	0.	0.	0.16	0.	0.16	0.39	0.	0.
100	0.	0.	0.	0.	0.26	0.	0.21	0.42	0.	0.
110	0.	0.	0.	0.	0.21	0.	0.19	0.34	0.	0.
120	0.	0.	0.	0.	0.14	0.	0.20	0.21	0.	0.
130	0.	0.	0.	0.	0.13	0.	0.11	0.19	0.	0.
140	0.	0.	0.	0.	0.12	0.	0.	0.19	0.	0.
150	0.	0.	0.	0.	0.12	0.	0.	0.30	0.	0.
160	0.	0.	0.	0.	0.20	0.	0.	0.	0.	0.
170	0.	0.	0.	0.	0.16	0.	0.	0.	0.	0.
180	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.

RADIANCE VALUES ARE IN MICROWATTS. VA AND SA ARE IN DEGREES.

FIGURE 11

IR NUMBER OF OBSERVATIONS AS A FUNCTION OF SUN AZIMUTH

FILTER 5 AT 1005 AST INSOL ANGLE 45.4 DEG
SPECTRAL BAND 1.57 TO 2.98 MICRONS ELEVATION 18.3 KM

VA	0	10	20	30	40	50	60	70	80	90
SA										
R	0.	0.	0.	75.	0.	0.	0.	0.	0.	0.
0 A	0.	0.	0.	90.	0.	0.	0.	0.	0.	0.
L	0.	0.	0.	105.	0.	0.	0.	0.	0.	0.
R	0.	0.	0.	150.	0.	0.	0.	0.	0.	0.
10 A	0.	0.	0.	158.	0.	0.	0.	0.	0.	0.
L	0.	0.	0.	165.	0.	0.	0.	0.	0.	0.
R	0.	0.	0.	15.	0.	0.	0.	0.	0.	0.
20 A	0.	0.	0.	98.	0.	0.	0.	0.	0.	0.
L	0.	0.	0.	180.	0.	0.	0.	0.	0.	0.
R	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
30 A	0.	0.	0.	98.	0.	0.	0.	0.	0.	0.
L	0.	0.	0.	195.	0.	0.	0.	0.	0.	0.
R	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
40 A	0.	0.	0.	83.	0.	0.	0.	0.	0.	0.
L	0.	0.	0.	165.	0.	0.	0.	0.	0.	0.
R	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
50 A	0.	0.	0.	90.	0.	0.	0.	0.	0.	0.
L	0.	0.	0.	180.	0.	0.	0.	0.	0.	0.
R	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
60 A	0.	0.	0.	113.	0.	0.	0.	0.	0.	0.
L	0.	0.	0.	225.	0.	0.	0.	0.	0.	0.

RADIANCE VALUES ARE IN MICROWATTS. VA AND SA ARE IN DEGREES.

FIGURE 12

IR NUMBER OF OBSERVATIONS AS A FUNCTION OF SUN AZIMUTH

FILTER 5 AT 1005 AST INSOL ANGLE 45.4 DEG
SPECTRAL BAND 1.57 TO 2.98 MICRONS ELEVATION 18.3 KM

	VA	0	10	20	30	40	50	60	70	80	90
SA											
R		0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
70 A		0.	0.	0.	90.	0.	0.	0.	0.	0.	0.
L		0.	0.	0.	180.	0.	0.	0.	0.	0.	0.
R		0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
80 A		0.	0.	0.	113.	0.	0.	0.	0.	0.	0.
L		0.	0.	0.	225.	0.	0.	0.	0.	0.	0.
R		0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
90 A		0.	0.	0.	98.	0.	0.	0.	0.	0.	0.
L		0.	0.	0.	195.	0.	0.	0.	0.	0.	0.
R		0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
100 A		0.	0.	0.	90.	0.	0.	0.	0.	0.	0.
L		0.	0.	0.	180.	0.	0.	0.	0.	0.	0.
R		0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
110 A		0.	0.	0.	98.	0.	0.	0.	0.	0.	0.
L		0.	0.	0.	195.	0.	0.	0.	0.	0.	0.
R		0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
120 A		0.	0.	0.	60.	0.	0.	0.	0.	0.	0.
L		0.	0.	0.	120.	0.	0.	0.	0.	0.	0.

RADIANCE VALUES ARE IN MICROWATTS. VA AND SA ARE IN DEGREES.

FIGURE 12 CONT.

IR NUMBER OF OBSERVATIONS AS A FUNCTION OF SUN AZIMUTH

FILTER 5 AT 1005 AST INSOL ANGLE 45.4 DEG
SPECTRAL BAND 1.57 TO 2.98 MICRONS ELEVATION 18.3 KM

VA SA	0	10	20	30	40	50	60	70	80	90
R	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
130 A	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
L	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
R	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
140 A	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
L	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
R	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
150 A	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
L	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
R	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
160 A	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
L	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
R	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
170 A	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
L	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
R	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
180 A	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
L	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.

RADIANCE VALUES ARE IN MICROWATTS. VA AND SA ARE IN DEGREES.

FIGURE 12 CONT.

IR MEAN RADIANCE AS A FUNCTION OF SUN AZIMUTH

FILTER 5 AT 1005 AST INSOL ANGLE 45.4 DEG
SPECTRAL BAND 1.57 TO 2.98 MICRONS ELEVATION 18.3 KM

VA	0	10	20	30	40	50	60	70	80	90
SA										
R	0.	0.	0.	34.56	0.	0.	0.	0.	0.	0.
0 A	0.	0.	0.	34.50	0.	0.	0.	0.	0.	0.
L	0.	0.	0.	34.45	0.	0.	0.	0.	0.	0.
R	0.	0.	0.	45.27	0.	0.	0.	0.	0.	0.
10 A	0.	0.	0.	40.44	0.	0.	0.	0.	0.	0.
L	0.	0.	0.	36.05	0.	0.	0.	0.	0.	0.
R	0.	0.	0.	47.18	0.	0.	0.	0.	0.	0.
20 A	0.	0.	0.	24.66	0.	0.	0.	0.	0.	0.
L	0.	0.	0.	22.78	0.	0.	0.	0.	0.	0.
R	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
30 A	0.	0.	0.	44.25	0.	0.	0.	0.	0.	0.
L	0.	0.	0.	44.25	0.	0.	0.	0.	0.	0.
R	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
40 A	0.	0.	0.	43.27	0.	0.	0.	0.	0.	0.
L	0.	0.	0.	43.27	0.	0.	0.	0.	0.	0.
R	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
50 A	0.	0.	0.	45.28	0.	0.	0.	0.	0.	0.
L	0.	0.	0.	45.28	0.	0.	0.	0.	0.	0.
R	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
60 A	0.	0.	0.	36.22	0.	0.	0.	0.	0.	0.
L	0.	0.	0.	36.22	0.	0.	0.	0.	0.	0.

RADIANCE VALUES ARE IN MICROWATTS. VA AND SA ARE IN DEGREES.

IR MEAN RADIANCE AS A FUNCTION OF SUN AZIMUTH

FILTER 5 AT 1005 AST INSOL ANGLE 45.4 DEG
SPECTRAL BAND 1.57 TO 2.98 MICRONS ELEVATION 18.3 KM

VA	0	10	20	30	40	50	60	70	80	90
SA										
R	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
70 A	0.	0.	0.	37.02	0.	0.	0.	0.	0.	0.
L	0.	0.	0.	37.02	0.	0.	0.	0.	0.	0.
R	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
80 A	0.	0.	0.	43.41	0.	0.	0.	0.	0.	0.
L	0.	0.	0.	43.41	0.	0.	0.	0.	0.	0.
R	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
90 A	0.	0.	0.	42.67	0.	0.	0.	0.	0.	0.
L	0.	0.	0.	42.67	0.	0.	0.	0.	0.	0.
R	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
100 A	0.	0.	0.	40.09	0.	0.	0.	0.	0.	0.
L	0.	0.	0.	40.09	0.	0.	0.	0.	0.	0.
R	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
110 A	0.	0.	0.	40.47	0.	0.	0.	0.	0.	0.
L	0.	0.	0.	40.47	0.	0.	0.	0.	0.	0.
R	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
120 A	0.	0.	0.	44.91	0.	0.	0.	0.	0.	0.
L	0.	0.	0.	44.91	0.	0.	0.	0.	0.	0.

RADIANCE VALUES ARE IN MICROWATTS. VA AND SA ARE IN DEGREES.

FIGURE 13 CONT.

IR MEAN RADIANCE AS A FUNCTION OF SUN AZIMUTH

FILTER 5 AT 1005 AST INSOL ANGLE 45.4 DEG
SPECTRAL BAND 1.57 TO 2.98 MICRONS ELEVATION 18.3 KM

VA	0	10	20	30	40	50	60	70	80	90
SA										
R	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
130 A	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
L	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
R	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
140 A	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
L	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
R	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
150 A	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
L	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
R	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
160 A	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
L	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
R	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
170 A	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
L	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
R	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
180 A	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
L	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.

RADIANCE VALUES ARE IN MICROWATTS. VA AND SA ARE IN DEGREES.

FIGURE 13 CONT.

IR RMS FLUCTUATION AS A FUNCTION OF SUN AZIMUTH

FILTER 5 AT 1005 AST INSOL ANGLE 45.4 DEG
SPECTRAL BAND 1.57 TO 2.98 MICRONS ELEVATION 18.3 KM

VA SA	0	10	20	30	40	50	60	70	80	90
R	0.	0.	0.	8.26	0.	0.	0.	0.	0.	0.
0 A	0.	0.	0.	9.25	0.	0.	0.	0.	0.	0.
L	0.	0.	0.	4.17	0.	0.	0.	0.	0.	0.
R	0.	0.	0.	4.52	0.	0.	0.	0.	0.	0.
10 A	0.	0.	0.	9.96	0.	0.	0.	0.	0.	0.
L	0.	0.	0.	8.87	0.	0.	0.	0.	0.	0.
R	0.	0.	0.	1.30	0.	0.	0.	0.	0.	0.
20 A	0.	0.	0.	7.60	0.	0.	0.	0.	0.	0.
L	0.	0.	0.	7.49	0.	0.	0.	0.	0.	0.
R	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
30 A	0.	0.	0.	5.83	0.	0.	0.	0.	0.	0.
L	0.	0.	0.	5.83	0.	0.	0.	0.	0.	0.
R	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
40 A	0.	0.	0.	6.42	0.	0.	0.	0.	0.	0.
L	0.	0.	0.	6.42	0.	0.	0.	0.	0.	0.
R	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
50 A	0.	0.	0.	8.14	0.	0.	0.	0.	0.	0.
L	0.	0.	0.	8.14	0.	0.	0.	0.	0.	0.
R	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
60 A	0.	0.	0.	16.05	0.	0.	0.	0.	0.	0.
L	0.	0.	0.	16.05	0.	0.	0.	0.	0.	0.

RADIANCE VALUES ARE IN MICROWATTS. VA AND SA ARE IN DEGREES.

IR RMS FLUCTUATION AS A FUNCTION OF SUN AZIMUTH

FILTER 5 AT 1005 AST INSOL ANGLE 45.4 DEG
SPECTRAL BAND 1.57 TO 2.98 MICRONS ELEVATION 18.3 KM

VA	0	10	20	30	40	50	60	70	80	90
SA										
R	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
70 A	0.	0.	0.	8.74	0.	0.	0.	0.	0.	0.
L	0.	0.	0.	8.74	0.	0.	0.	0.	0.	0.
R	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
80 A	0.	0.	0.	7.27	0.	0.	0.	0.	0.	0.
L	0.	0.	0.	7.27	0.	0.	0.	0.	0.	0.
R	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
90 A	0.	0.	0.	6.75	0.	0.	0.	0.	0.	0.
L	0.	0.	0.	6.75	0.	0.	0.	0.	0.	0.
R	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
100 A	0.	0.	0.	7.72	0.	0.	0.	0.	0.	0.
L	0.	0.	0.	7.72	0.	0.	0.	0.	0.	0.
R	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
110 A	0.	0.	0.	4.80	0.	0.	0.	0.	0.	0.
L	0.	0.	0.	4.80	0.	0.	0.	0.	0.	0.
R	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
120 A	0.	0.	0.	2.66	0.	0.	0.	0.	0.	0.
L	0.	0.	0.	2.66	0.	0.	0.	0.	0.	0.

RADIANCE VALUES ARE IN MICROWATTS. VA AND SA ARE IN DEGREES.

FIGURE 14 CONT.

IR RMS FLUCTUATION AS A FUNCTION OF SUN AZIMUTH

FILTER 5 AT 1005 AST INSOL ANGLE 45.4 DEG
SPECTRAL BAND 1.57 TO 2.98 MICRONS ELEVATION 18.3 KM

VA	0	10	20	30	40	50	60	70	80	90
SA										
R	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
130 A	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
L	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
R	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
140 A	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
L	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
R	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
150 A	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
L	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
R	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
160 A	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
L	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
R	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
170 A	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
L	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
R	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
180 A	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
L	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.

RADIANCE VALUES ARE IN MICROWATTS. VA AND SA ARE IN DEGREES.

FIGURE 14 CONT.

IR NUMBER OF OBSERVATIONS AS A FUNCTION OF SCATTERING ANGLE

FILTER 5 AT 1005 AST INSOL ANGLE 45.4 DEG
SPECTRAL BAND 1.57 TO 2.98 MICRONS ELEVATION 18.3 KM

SA	VA	0	10	20	30	40	50	60	70	80	90
0		0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
10		0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
20		0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
30		0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
40		0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
50		0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
60		0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
70		0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
80		0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
90		0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
100		0.	0.	0.	180.	0.	0.	0.	0.	0.	0.
110		0.	0.	0.	1095.	0.	0.	0.	0.	0.	0.
120		0.	0.	0.	555.	0.	0.	0.	0.	0.	0.
130		0.	0.	0.	435.	0.	0.	0.	0.	0.	0.
140		0.	0.	0.	285.	0.	0.	0.	0.	0.	0.
150		0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
160		0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
170		0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
180		0.	0.	0.	0.	0.	0.	0.	0.	0.	0.

RADIANCE VALUES ARE IN MICROWATTS. VA AND SA ARE IN DEGREES.

FIGURE 15

IR MEAN RADIANCE AS A FUNCTION OF SCATTERING ANGLE

FILTER 5 AT 1005 AST INSOL ANGLE 45.4 DEG
SPECTRAL BAND 1.57 TO 2.98 MICRONS ELEVATION 18.3 KM

SA	VA	0	10	20	30	40	50	60	70	80	90
0	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
10	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
20	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
30	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
40	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
50	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
60	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
70	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
80	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
90	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
100	0.	0.	0.	34.71	0.	0.	0.	0.	0.	0.	0.
110	0.	0.	0.	39.72	0.	0.	0.	0.	0.	0.	0.
120	0.	0.	0.	37.90	0.	0.	0.	0.	0.	0.	0.
130	0.	0.	0.	41.66	0.	0.	0.	0.	0.	0.	0.
140	0.	0.	0.	42.72	0.	0.	0.	0.	0.	0.	0.
150	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
160	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
170	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
180	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.

RADIANCE VALUES ARE IN MICROWATTS. VA AND SA ARE IN DEGREES.

FIGURE 16

IR RMS FLUCTUATION AS A FUNCTION OF SCATTERING ANGLE

FILTER 5 AT 1005 AST INSOL ANGLE 45.4 DEG
SPECTRAL BAND 1.57 TO 2.98 MICRONS ELEVATION 18.3 KM

SA	VA	0	10	20	30	40	50	60	70	80	90
0	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
10	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
20	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
30	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
40	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
50	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
60	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
70	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
80	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
90	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
100	0.	0.	0.	6.75	0.	0.	0.	0.	0.	0.	0.
110	0.	0.	0.	10.63	0.	0.	0.	0.	0.	0.	0.
120	0.	0.	0.	12.29	0.	0.	0.	0.	0.	0.	0.
130	0.	0.	0.	7.25	0.	0.	0.	0.	0.	0.	0.
140	0.	0.	0.	4.49	0.	0.	0.	0.	0.	0.	0.
150	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
160	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
170	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
180	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.

RADIANCE VALUES ARE IN MICROWATTS. VA AND SA ARE IN DEGREES.

FIGURE 17

IR NUMBER OF OBSERVATIONS AS A FUNCTION OF SUN AZIMUTH

FILTER 3 AT 1009 AST INSOL ANGLE 45.1 DEG
SPECTRAL BAND 2.37 TO 2.80 MICRONS ELEVATION 19.1 KM

VA SA	0	10	20	30	40	50	60	70	80	90
R	0.	0.	0.	0.	0.	0.	0.	105.	0.	0.
0 A	0.	0.	0.	0.	0.	0.	0.	98.	0.	0.
L	0.	0.	0.	0.	0.	0.	0.	90.	0.	0.
R	0.	0.	0.	0.	0.	0.	0.	185.	0.	0.
10 A	0.	0.	0.	0.	0.	0.	0.	189.	0.	0.
L	0.	0.	0.	0.	0.	0.	0.	193.	0.	0.
R	0.	0.	0.	0.	15.	0.	0.	148.	0.	0.
20 A	0.	0.	0.	0.	8.	0.	0.	154.	0.	0.
L	0.	0.	0.	0.	0.	0.	0.	160.	0.	0.
R	0.	0.	0.	0.	180.	0.	0.	180.	0.	0.
30 A	0.	0.	0.	0.	90.	0.	0.	163.	0.	0.
L	0.	0.	0.	0.	0.	0.	0.	146.	0.	0.
R	0.	0.	0.	0.	173.	0.	0.	194.	0.	0.
40 A	0.	0.	0.	0.	87.	0.	0.	191.	0.	0.
L	0.	0.	0.	0.	0.	0.	0.	188.	0.	0.
R	0.	0.	0.	0.	126.	0.	0.	150.	0.	0.
50 A	0.	0.	0.	0.	63.	0.	0.	165.	0.	0.
L	0.	0.	0.	0.	0.	0.	0.	180.	0.	0.
R	0.	0.	0.	0.	230.	0.	0.	163.	0.	0.
60 A	0.	0.	0.	0.	115.	0.	0.	172.	0.	0.
L	0.	0.	0.	0.	0.	0.	0.	180.	0.	0.

RADIANCE VALUES ARE IN MICROWATTS. VA AND SA ARE IN DEGREES.

IR NUMBER OF OBSERVATIONS AS A FUNCTION OF SUN AZIMUTH

FILTER 3 AT 1009 AST INSOL ANGLE 45.1 DEG
SPECTRAL BAND 2.37 TO 2.80 MICRONS ELEVATION 19.1 KM

VA	0	10	20	30	40	50	60	70	80	90
SA										
R	0.	0.	0.	0.	191.	0.	0.	195.	0.	0.
70 A	0.	0.	0.	0.	96.	0.	0.	195.	0.	0.
L	0.	0.	0.	0.	0.	0.	0.	195.	0.	0.
R	0.	0.	0.	0.	255.	0.	0.	101.	0.	0.
80 A	0.	0.	0.	23.	128.	0.	0.	148.	0.	0.
L	0.	0.	0.	45.	0.	0.	0.	195.	0.	0.
R	0.	0.	0.	0.	190.	0.	0.	120.	0.	0.
90 A	0.	0.	0.	104.	95.	0.	0.	150.	0.	0.
L	0.	0.	0.	208.	0.	0.	0.	180.	0.	0.
R	0.	0.	0.	0.	72.	0.	0.	150.	0.	0.
100 A	0.	0.	0.	81.	36.	0.	0.	172.	0.	0.
L	0.	0.	0.	162.	0.	0.	0.	193.	0.	0.
R	0.	0.	0.	0.	159.	0.	0.	178.	0.	0.
110 A	0.	0.	0.	105.	80.	0.	0.	167.	0.	0.
L	0.	0.	0.	209.	0.	0.	0.	156.	0.	0.
R	0.	0.	0.	0.	176.	0.	0.	164.	0.	0.
120 A	0.	0.	0.	118.	88.	0.	0.	156.	0.	0.
L	0.	0.	0.	235.	0.	0.	0.	147.	0.	0.

RADIANCE VALUES ARE IN MICROWATTS. VA AND SA ARE IN DEGREES.

FIGURE 18 CONT.

IR NUMBER OF OBSERVATIONS AS A FUNCTION OF SUN AZIMUTH

FILTER 3 AT 1009 AST INSOL ANGLE 45.1 DEG
SPECTRAL BAND 2.37 TO 2.80 MICRONS ELEVATION 19.1 KM

VA SA	0	10	20	30	40	50	60	70	80	90
R	0.	0.	0.	0.	177.	0.	0.	225.	0.	0.
130 A	0.	0.	0.	7.	89.	0.	0.	115.	0.	0.
L	0.	0.	0.	14.	0.	0.	0.	4.	0.	0.
R	0.	0.	0.	0.	195.	0.	0.	193.	0.	0.
140 A	0.	0.	0.	0.	98.	0.	0.	97.	0.	0.
L	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
R	0.	0.	0.	0.	147.	0.	0.	240.	0.	0.
150 A	0.	0.	0.	0.	74.	0.	0.	120.	0.	0.
L	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
R	0.	0.	0.	0.	188.	0.	0.	194.	0.	0.
160 A	0.	0.	0.	0.	94.	0.	0.	97.	0.	0.
L	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
R	0.	0.	0.	0.	58.	0.	0.	45.	0.	0.
170 A	0.	0.	0.	0.	29.	0.	0.	23.	0.	0.
L	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
R	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
180 A	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
L	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.

RADIANCE VALUES ARE IN MICROWATTS. VA AND SA ARE IN DEGREES.

FIGURE 18 CONT.

IR MEAN RADIANCE AS A FUNCTION OF SUN AZIMUTH

FILTER 3 AT 1009 AST INSOL ANGLE 45.1 DEG
SPECTRAL BAND 2.37 TO 2.80 MICRONS ELEVATION 19.1 KM

VA	0	10	20	30	40	50	60	70	80	90
SA										
R	0.	0.	0.	0.	0.	0.	0.	3.66	0.	0.
0 A	0.	0.	0.	0.	0.	0.	0.	3.39	0.	0.
L	0.	0.	0.	0.	0.	0.	0.	3.09	0.	0.
R	0.	0.	0.	0.	0.	0.	0.	26.27	0.	0.
10 A	0.	0.	0.	0.	0.	0.	0.	19.03	0.	0.
L	0.	0.	0.	0.	0.	0.	0.	12.10	0.	0.
R	0.	0.	0.	0.	6.28	0.	0.	24.76	0.	0.
20 A	0.	0.	0.	0.	6.28	0.	0.	19.80	0.	0.
L	0.	0.	0.	0.	0.	0.	0.	15.21	0.	0.
R	0.	0.	0.	0.	4.18	0.	0.	16.98	0.	0.
30 A	0.	0.	0.	0.	4.18	0.	0.	16.20	0.	0.
L	0.	0.	0.	0.	0.	0.	0.	15.24	0.	0.
R	0.	0.	0.	0.	6.30	0.	0.	15.18	0.	0.
40 A	0.	0.	0.	0.	6.30	0.	0.	13.03	0.	0.
L	0.	0.	0.	0.	0.	0.	0.	10.81	0.	0.
R	0.	0.	0.	0.	11.71	0.	0.	17.47	0.	0.
50 A	0.	0.	0.	0.	11.71	0.	0.	24.13	0.	0.
L	0.	0.	0.	0.	0.	0.	0.	29.68	0.	0.
R	0.	0.	0.	0.	5.32	0.	0.	21.62	0.	0.
60 A	0.	0.	0.	0.	5.32	0.	0.	24.79	0.	0.
L	0.	0.	0.	0.	0.	0.	0.	27.67	0.	0.

RADIANCE VALUES ARE IN MICROWATTS. VA AND SA ARE IN DEGREES.

FIGURE 19

IR MEAN RADIANCE AS A FUNCTION OF SUN AZIMUTH

FILTER 3 AT 1009 AST INSOL ANGLE 45.1 DEG
SPECTRAL BAND 2.37 TO 2.80 MICRONS ELEVATION 19.1 KM

SA	VA	0	10	20	30	40	50	60	70	80	90
	R	0.	0.	0.	0.	2.28	0.	0.	25.69	0.	0.
70	A	0.	0.	0.	0.	2.28	0.	0.	28.40	0.	0.
	L	0.	0.	0.	0.	0.	0.	0.	31.10	0.	0.
	R	0.	0.	0.	0.	3.62	0.	0.	19.88	0.	0.
80	A	0.	0.	0.	7.36	3.62	0.	0.	26.44	0.	0.
	L	0.	0.	0.	7.36	0.	0.	0.	29.83	0.	0.
	R	0.	0.	0.	0.	7.26	0.	0.	21.52	0.	0.
90	A	0.	0.	0.	10.51	7.26	0.	0.	25.48	0.	0.
	L	0.	0.	0.	10.51	0.	0.	0.	28.11	0.	0.
	R	0.	0.	0.	0.	6.81	0.	0.	31.34	0.	0.
100	A	0.	0.	0.	5.84	6.81	0.	0.	23.93	0.	0.
	L	0.	0.	0.	5.84	0.	0.	0.	18.17	0.	0.
	R	0.	0.	0.	0.	8.68	0.	0.	32.79	0.	0.
110	A	0.	0.	0.	5.65	8.68	0.	0.	25.35	0.	0.
	L	0.	0.	0.	5.65	0.	0.	0.	16.87	0.	0.
	R	0.	0.	0.	0.	3.90	0.	0.	32.97	0.	0.
120	A	0.	0.	0.	12.80	3.90	0.	0.	26.39	0.	0.
	L	0.	0.	0.	12.80	0.	0.	0.	19.05	0.	0.

RADIANCE VALUES ARE IN MICROWATTS. VA AND SA ARE IN DEGREES.

FIGURE 19 CONT.

IR MEAN RADIANCE AS A FUNCTION OF SUN AZIMUTH

FILTER 3 AT 1009 AST INSOL ANGLE 45.1 DEG
SPECTRAL BAND 2.37 TO 2.80 MICRONS ELEVATION 19.1 KM

	VA	0	10	20	30	40	50	60	70	80	90
SA											
	R	0.	0.	0.	0.	7.77	0.	0.	28.00	0.	0.
130	A	0.	0.	0.	16.00	7.77	0.	0.	27.65	0.	0.
	L	0.	0.	0.	16.00	0.	0.	0.	8.15	0.	0.
	R	0.	0.	0.	0.	17.86	0.	0.	19.21	0.	0.
140	A	0.	0.	0.	0.	17.86	0.	0.	19.21	0.	0.
	L	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
	R	0.	0.	0.	0.	5.60	0.	0.	35.43	0.	0.
150	A	0.	0.	0.	0.	5.60	0.	0.	35.43	0.	0.
	L	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
	R	0.	0.	0.	0.	3.66	0.	0.	33.78	0.	0.
160	A	0.	0.	0.	0.	3.66	0.	0.	33.78	0.	0.
	L	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
	R	0.	0.	0.	0.	2.33	0.	0.	31.83	0.	0.
170	A	0.	0.	0.	0.	2.33	0.	0.	31.83	0.	0.
	L	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
	R	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
180	A	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
	L	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.

RADIANCE VALUES ARE IN MICROWATTS. VA AND SA ARE IN DEGREES.

FIGURE 19 CONT.

IR RMS FLUCTUATION AS A FUNCTION OF SUN AZIMUTH

FILTER 3 AT 1009 AST						INSOL ANGLE 45.1 DEG				
SPECTRAL BAND 2.37 TO 2.80 MICRONS						ELEVATION 19.1 KM				
VA	0	10	20	30	40	50	60	70	80	90
SA										
R	0.	0.	0.	0.	0.	0.	0.	1.85	0.	0.
0 A	0.	0.	0.	0.	0.	0.	0.	1.97	0.	0.
L	0.	0.	0.	0.	0.	0.	0.	0.68	0.	0.
R	0.	0.	0.	0.	0.	0.	0.	6.75	0.	0.
10 A	0.	0.	0.	0.	0.	0.	0.	7.52	0.	0.
L	0.	0.	0.	0.	0.	0.	0.	3.30	0.	0.
R	0.	0.	0.	0.	0.47	0.	0.	7.62	0.	0.
20 A	0.	0.	0.	0.	0.47	0.	0.	7.66	0.	0.
L	0.	0.	0.	0.	0.	0.	0.	0.75	0.	0.
R	0.	0.	0.	0.	2.78	0.	0.	1.20	0.	0.
30 A	0.	0.	0.	0.	2.78	0.	0.	1.35	0.	0.
L	0.	0.	0.	0.	0.	0.	0.	0.62	0.	0.
R	0.	0.	0.	0.	5.43	0.	0.	1.20	0.	0.
40 A	0.	0.	0.	0.	5.43	0.	0.	3.34	0.	0.
L	0.	0.	0.	0.	0.	0.	0.	3.12	0.	0.
R	0.	0.	0.	0.	7.47	0.	0.	0.58	0.	0.
50 A	0.	0.	0.	0.	7.47	0.	0.	4.55	0.	0.
L	0.	0.	0.	0.	0.	0.	0.	4.51	0.	0.
R	0.	0.	0.	0.	3.20	0.	0.	1.53	0.	0.
60 A	0.	0.	0.	0.	3.20	0.	0.	6.72	0.	0.
L	0.	0.	0.	0.	0.	0.	0.	6.54	0.	0.

RADIANCE VALUES ARE IN MICROWATTS. VA AND SA ARE IN DEGREES.

FIGURE 20

IR RMS FLUCTUATION AS A FUNCTION OF SUN AZIMUTH

FILTER 3 AT 1009 AST INSOL ANGLE 45.1 DEG
SPECTRAL BAND 2.37 TO 2.80 MICRONS ELEVATION 19.1 KM

VA	0	10	20	30	40	50	60	70	80	90
SA										
R	0.	0.	0.	0.	2.54	0.	0.	1.88	0.	0.
70 A	0.	0.	0.	0.	2.54	0.	0.	6.99	0.	0.
L	0.	0.	0.	0.	0.	0.	0.	6.73	0.	0.
R	0.	0.	0.	0.	3.19	0.	0.	3.25	0.	0.
80 A	0.	0.	0.	1.71	3.19	0.	0.	4.60	0.	0.
L	0.	0.	0.	1.71	0.	0.	0.	3.25	0.	0.
R	0.	0.	0.	0.	6.25	0.	0.	1.91	0.	0.
90 A	0.	0.	0.	7.44	6.25	0.	0.	5.39	0.	0.
L	0.	0.	0.	7.44	0.	0.	0.	5.04	0.	0.
R	0.	0.	0.	0.	3.26	0.	0.	2.09	0.	0.
100 A	0.	0.	0.	4.76	3.26	0.	0.	3.94	0.	0.
L	0.	0.	0.	4.76	0.	0.	0.	3.34	0.	0.
R	0.	0.	0.	0.	6.12	0.	0.	1.64	0.	0.
110 A	0.	0.	0.	4.48	6.12	0.	0.	3.47	0.	0.
L	0.	0.	0.	4.48	0.	0.	0.	3.06	0.	0.
R	0.	0.	0.	0.	3.61	0.	0.	1.54	0.	0.
120 A	0.	0.	0.	3.87	3.61	0.	0.	2.33	0.	0.
L	0.	0.	0.	3.87	0.	0.	0.	1.74	0.	0.

RADIANCE VALUES ARE IN MICROWATTS. VA AND SA ARE IN DEGREES.

FIGURE 20 CONT.

IR RMS FLUCTUATION AS A FUNCTION OF SUN AZIMUTH

FILTER 3 AT 1009 AST INSOL ANGLE 45.1 DEG
SPECTRAL BAND 2.37 TO 2.80 MICRONS ELEVATION 19.1 KM

	VA	0	10	20	30	40	50	60	70	80	90
SA											
	R	0.	0.	0.	0.	6.88	0.	0.	2.69	0.	0.
130	A	0.	0.	0.	1.05	6.88	0.	0.	3.43	0.	0.
	L	0.	0.	0.	1.05	0.	0.	0.	2.13	0.	0.
	R	0.	0.	0.	0.	6.12	0.	0.	3.85	0.	0.
140	A	0.	0.	0.	0.	6.12	0.	0.	3.85	0.	0.
	L	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
	R	0.	0.	0.	0.	3.90	0.	0.	3.14	0.	0.
150	A	0.	0.	0.	0.	3.90	0.	0.	3.14	0.	0.
	L	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
	R	0.	0.	0.	0.	3.35	0.	0.	2.11	0.	0.
160	A	0.	0.	0.	0.	3.35	0.	0.	2.11	0.	0.
	L	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
	R	0.	0.	0.	0.	1.85	0.	0.	0.94	0.	0.
170	A	0.	0.	0.	0.	1.85	0.	0.	0.94	0.	0.
	L	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
	R	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
180	A	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
	L	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.

RADIANCE VALUES ARE IN MICROWATTS. VA AND SA ARE IN DEGREES.

FIGURE 20 CONT.

IR NUMBER OF OBSERVATIONS AS A FUNCTION OF SCATTERING ANGLE

FILTER 3 AT 1009 AST INSOL ANGLE 45.1 DEG
SPECTRAL BAND 2.37 TO 2.80 MICRONS ELEVATION 19.1 KM

SA	VA	0	10	20	30	40	50	60	70	80	90
0		0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
10		0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
20		0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
30		0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
40		0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
50		0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
60		0.	0.	0.	0.	0.	0.	0.	743.	0.	0.
70		0.	0.	0.	0.	0.	0.	0.	783.	0.	0.
80		0.	0.	0.	0.	0.	0.	0.	617.	0.	0.
90		0.	0.	0.	0.	60.	0.	0.	584.	0.	0.
100		0.	0.	0.	0.	505.	0.	0.	491.	0.	0.
110		0.	0.	0.	0.	455.	0.	0.	432.	0.	0.
120		0.	0.	0.	45.	313.	0.	0.	467.	0.	0.
130		0.	0.	0.	385.	229.	0.	0.	333.	0.	0.
140		0.	0.	0.	443.	265.	0.	0.	343.	0.	0.
150		0.	0.	0.	0.	283.	0.	0.	344.	0.	0.
160		0.	0.	0.	0.	249.	0.	0.	0.	0.	0.
170		0.	0.	0.	0.	173.	0.	0.	0.	0.	0.
180		0.	0.	0.	0.	0.	0.	0.	0.	0.	0.

RADIANCE VALUES ARE IN MICROWATTS. VA AND SA ARE IN DEGREES.

FIGURE 21

IR MEAN RADIANCE AS A FUNCTION OF SCATTERING ANGLE

FILTER 3 AT 1009 AST INSOL ANGLE 45.1 DEG
SPECTRAL BAND 2.37 TO 2.80 MICRONS ELEVATION 19.1 KM

SA	VA	0	10	20	30	40	50	60	70	80	90
0	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
10	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
20	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
30	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
40	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
50	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
60	0.	0.	0.	0.	0.	0.	0.	0.	15.73	0.	0.
70	0.	0.	0.	0.	0.	0.	0.	0.	14.87	0.	0.
80	0.	0.	0.	0.	0.	0.	0.	0.	24.06	0.	0.
90	0.	0.	0.	0.	6.57	0.	0.	0.	27.38	0.	0.
100	0.	0.	0.	0.	6.73	0.	0.	0.	25.18	0.	0.
110	0.	0.	0.	0.	3.15	0.	0.	0.	23.43	0.	0.
120	0.	0.	0.	7.36	5.24	0.	0.	0.	25.06	0.	0.
130	0.	0.	0.	8.29	9.33	0.	0.	0.	29.02	0.	0.
140	0.	0.	0.	9.83	4.51	0.	0.	0.	25.51	0.	0.
150	0.	0.	0.	0.	14.43	0.	0.	0.	34.48	0.	0.
160	0.	0.	0.	0.	6.40	0.	0.	0.	0.	0.	0.
170	0.	0.	0.	0.	3.23	0.	0.	0.	0.	0.	0.
180	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.

RADIANCE VALUES ARE IN MICROWATTS. VA AND SA ARE IN DEGREES.

FIGURE 22

IR RMS FLUCTUATION AS A FUNCTION OF SCATTERING ANGLE

FILTER 3 AT 1009 ÅST INSOL ANGLE 45.1 DEG
SPECTRAL BAND 2.37 TO 2.80 MICRONS ELEVATION 19.1 KM

SA	VA	0	10	20	30	40	50	60	70	80	90
0	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
10	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
20	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
30	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
40	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
50	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
60	0.	0.	0.	0.	0.	0.	0.	0.	10.64	0.	0.
70	0.	0.	0.	0.	0.	0.	0.	0.	3.02	0.	0.
80	0.	0.	0.	0.	0.	0.	0.	0.	7.24	0.	0.
90	0.	0.	0.	0.	0.	2.07	0.	0.	5.85	0.	0.
100	0.	0.	0.	0.	0.	6.00	0.	0.	5.31	0.	0.
110	0.	0.	0.	0.	0.	3.12	0.	0.	6.89	0.	0.
120	0.	0.	0.	0.	1.71	3.20	0.	0.	7.71	0.	0.
130	0.	0.	0.	0.	6.74	6.91	0.	0.	4.79	0.	0.
140	0.	0.	0.	0.	5.51	3.73	0.	0.	8.15	0.	0.
150	0.	0.	0.	0.	0.	8.15	0.	0.	2.49	0.	0.
160	0.	0.	0.	0.	0.	5.35	0.	0.	0.	0.	0.
170	0.	0.	0.	0.	0.	3.41	0.	0.	0.	0.	0.
180	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.

RADIANCE VALUES ARE IN MICROWATTS. VA AND SA ARE IN DEGREES.

FIGURE 23

IR NUMBER OF OBSERVATIONS AS A FUNCTION OF SUN AZIMUTH

FILTER 2 AT 1013 AST INSOL ANGLE 44.8 DEG
SPECTRAL BAND 2.63 TO 2.80 MICRONS ELEVATION 20.0 KM

VA SA	0	10	20	30	40	50	60	70	80	90
R	0.	0.	0.	0.	0.	113.	0.	86.	0.	0.
0 A	0.	0.	0.	0.	0.	106.	0.	87.	0.	0.
L	0.	0.	0.	0.	0.	99.	0.	87.	0.	0.
R	0.	0.	0.	0.	0.	114.	0.	194.	0.	0.
10 A	0.	0.	0.	0.	0.	124.	0.	177.	0.	0.
L	0.	0.	0.	0.	0.	133.	0.	159.	0.	0.
R	0.	0.	0.	0.	0.	0.	60.	221.	0.	0.
20 A	0.	0.	0.	0.	0.	52.	30.	199.	0.	0.
L	0.	0.	0.	0.	0.	104.	0.	177.	0.	0.
R	0.	0.	0.	207.	0.	0.	192.	124.	0.	0.
30 A	0.	0.	0.	104.	0.	66.	96.	144.	0.	0.
L	0.	0.	0.	0.	0.	132.	0.	163.	0.	0.
R	0.	0.	0.	222.	0.	44.	175.	176.	0.	0.
40 A	0.	0.	0.	111.	0.	116.	88.	169.	0.	0.
L	0.	0.	0.	0.	0.	187.	0.	161.	0.	0.
R	0.	0.	0.	208.	0.	0.	90.	179.	0.	0.
50 A	0.	0.	0.	104.	0.	96.	45.	156.	0.	0.
L	0.	0.	0.	0.	0.	192.	0.	133.	0.	0.
R	0.	0.	0.	209.	0.	0.	208.	146.	0.	0.
60 A	0.	0.	0.	105.	0.	45.	104.	167.	0.	0.
L	0.	0.	0.	0.	0.	90.	0.	188.	0.	0.

RADIANCE VALUES ARE IN MICROWATTS. VA AND SA ARE IN DEGREES.

FIGURE 24

IR NUMBER OF OBSERVATIONS AS A FUNCTION OF SUN AZIMUTH

FILTER 2 AT 1013 AST INSOL ANGLE 44.8 DEG
SPECTRAL BAND 2.63 TO 2.80 MICRONS ELEVATION 20.0 KM

VA SA	0	10	20	30	40	50	60	70	80	90
R	0.	0.	0.	135.	0.	0.	192.	173.	0.	0.
70 A	0.	0.	0.	68.	0.	75.	96.	178.	0.	0.
L	0.	0.	0.	0.	0.	149.	0.	182.	0.	0.
R	0.	0.	0.	193.	0.	0.	225.	161.	0.	0.
80 A	0.	0.	0.	97.	0.	73.	113.	182.	0.	0.
L	0.	0.	0.	0.	0.	146.	0.	202.	0.	0.
R	0.	0.	30.	134.	0.	0.	148.	202.	0.	0.
90 A	0.	0.	15.	67.	0.	83.	74.	153.	0.	0.
L	0.	0.	0.	0.	0.	165.	0.	103.	0.	0.
R	0.	0.	0.	135.	0.	0.	209.	161.	0.	0.
100 A	0.	0.	0.	68.	0.	74.	105.	167.	0.	0.
L	0.	0.	0.	0.	0.	148.	0.	173.	0.	0.
R	0.	0.	0.	194.	0.	0.	101.	203.	0.	0.
110 A	0.	0.	0.	97.	0.	74.	51.	176.	0.	0.
L	0.	0.	0.	0.	0.	148.	0.	148.	0.	0.
R	0.	0.	0.	165.	0.	0.	207.	177.	0.	0.
120 A	0.	0.	0.	83.	0.	75.	104.	179.	0.	0.
L	0.	0.	0.	0.	0.	150.	0.	180.	0.	0.

RADIANCE VALUES ARE IN MICROWATTS. VA AND SA ARE IN DEGREES.

FIGURE 24 CONT.

IR NUMBER OF OBSERVATIONS AS A FUNCTION OF SUN AZIMUTH

FILTER 2 AT 1013 AST INSOL ANGLE 44.8 DEG
SPECTRAL BAND 2.63 TO 2.80 MICRONS ELEVATION 20.0 KM

VA SA	0	10	20	30	40	50	60	70	80	90
R	0.	0.	0.	193.	0.	0.	189.	195.	0.	0.
130 A	0.	0.	0.	97.	0.	66.	95.	98.	0.	0.
L	0.	0.	0.	0.	0.	131.	0.	0.	0.	0.
R	0.	0.	0.	164.	0.	14.	160.	30.	0.	0.
140 A	0.	0.	0.	82.	0.	7.	80.	15.	0.	0.
L	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
R	0.	0.	0.	210.	0.	0.	183.	0.	0.	0.
150 A	0.	0.	0.	105.	0.	0.	92.	0.	0.	0.
L	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
R	0.	0.	0.	208.	0.	0.	113.	0.	0.	0.
160 A	0.	0.	0.	104.	0.	0.	57.	0.	0.	0.
L	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
R	0.	0.	0.	15.	0.	0.	0.	0.	0.	0.
170 A	0.	0.	0.	8.	0.	0.	0.	0.	0.	0.
L	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
R	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
180 A	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
L	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.

RADIANCE VALUES ARE IN MICROWATTS. VA AND SA ARE IN DEGREES.

FIGURE 24 CONT.

IR MEAN RADIANCE AS A FUNCTION OF SUN AZIMUTH

FILTER 2 AT 1013 AST INSOL ANGLE 44.8 DEG
SPECTRAL BAND 2.63 TO 2.80 MICRONS ELEVATION 20.0 KM

VA	0	10	20	30	40	50	60	70	80	90
SA										
R	0.	0.	0.	0.	0.	0.23	0.	0.28	0.	0.
0 A	0.	0.	0.	0.	0.	0.22	0.	0.24	0.	0.
L	0.	0.	0.	0.	0.	0.20	0.	0.19	0.	0.
R	0.	0.	0.	0.	0.	0.31	0.	0.23	0.	0.
10 A	0.	0.	0.	0.	0.	0.26	0.	0.21	0.	0.
L	0.	0.	0.	0.	0.	0.21	0.	0.19	0.	0.
R	0.	0.	0.	0.	0.	0.	0.18	0.21	0.	0.
20 A	0.	0.	0.	0.	0.	0.23	0.18	0.22	0.	0.
L	0.	0.	0.	0.	0.	0.23	0.	0.23	0.	0.
R	0.	0.	0.	0.19	0.	0.	0.21	0.25	0.	0.
30 A	0.	0.	0.	0.19	0.	0.19	0.21	0.23	0.	0.
L	0.	0.	0.	0.	0.	0.19	0.	0.20	0.	0.
R	0.	0.	0.	0.21	0.	0.22	0.21	0.23	0.	0.
40 A	0.	0.	0.	0.21	0.	0.22	0.21	0.21	0.	0.
L	0.	0.	0.	0.	0.	0.22	0.	0.18	0.	0.
R	0.	0.	0.	0.19	0.	0.	0.24	0.19	0.	0.
50 A	0.	0.	0.	0.19	0.	0.21	0.24	0.19	0.	0.
L	0.	0.	0.	0.	0.	0.21	0.	0.20	0.	0.
R	0.	0.	0.	0.19	0.	0.	0.20	0.22	0.	0.
60 A	0.	0.	0.	0.19	0.	0.17	0.20	0.22	0.	0.
L	0.	0.	0.	0.	0.	0.17	0.	0.22	0.	0.

RADIANCE VALUES ARE IN MICROWATTS. VA AND SA ARE IN DEGREES.

FIGURE 25

IR MEAN RADIANCE AS A FUNCTION OF SUN AZIMUTH

FILTER 2 AT 1013 AST INSOL ANGLE 44.8 DEG
SPECTRAL BAND 2.63 TO 2.80 MICRONS ELEVATION 20.0 KM

VA	0	10	20	30	40	50	60	70	80	90
SA										
R	0.	0.	0.	0.19	0.	0.	0.20	0.23	0.	0.
70 A	0.	0.	0.	0.19	0.	0.17	0.20	0.23	0.	0.
L	0.	0.	0.	0.	0.	0.17	0.	0.23	0.	0.
R	0.	0.	0.	0.18	0.	0.	0.20	0.24	0.	0.
80 A	0.	0.	0.	0.18	0.	0.19	0.20	0.23	0.	0.
L	0.	0.	0.	0.	0.	0.19	0.	0.22	0.	0.
R	0.	0.	0.16	0.17	0.	0.	0.17	0.24	0.	0.
90 A	0.	0.	0.16	0.17	0.	0.18	0.17	0.21	0.	0.
L	0.	0.	0.	0.	0.	0.18	0.	0.15	0.	0.
R	0.	0.	0.	0.17	0.	0.	0.22	0.22	0.	0.
100 A	0.	0.	0.	0.17	0.	0.18	0.22	0.21	0.	0.
L	0.	0.	0.	0.	0.	0.18	0.	0.20	0.	0.
R	0.	0.	0.	0.19	0.	0.	0.25	0.21	0.	0.
110 A	0.	0.	0.	0.19	0.	0.20	0.25	0.18	0.	0.
L	0.	0.	0.	0.	0.	0.20	0.	0.15	0.	0.
R	0.	0.	0.	0.18	0.	0.	0.20	0.21	0.	0.
120 A	0.	0.	0.	0.18	0.	0.18	0.20	0.18	0.	0.
L	0.	0.	0.	0.	0.	0.18	0.	0.15	0.	0.

RADIANCE VALUES ARE IN MICROWATTS. VA AND SA ARE IN DEGREES.

FIGURE 25 CONT.

IR MEAN RADIANCE AS A FUNCTION OF SUN AZIMUTH

FILTER 2 AT 1013 AST INSOL ANGLE 44.8 DEG
 SPECTRAL BAND 2.63 TO 2.80 MICRONS ELEVATION 20.0 KM

VA	0	10	20	30	40	50	60	70	80	90
SA										
R	0.	0.	0.	0.19	0.	0.	0.19	0.19	0.	0.
130 A	0.	0.	0.	0.19	0.	0.22	0.19	0.19	0.	0.
L	0.	0.	0.	0.	0.	0.22	0.	0.	0.	0.
R	0.	0.	0.	0.19	0.	0.21	0.22	0.18	0.	0.
140 A	0.	0.	0.	0.19	0.	0.21	0.22	0.18	0.	0.
L	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
R	0.	0.	0.	0.20	0.	0.	0.25	0.	0.	0.
150 A	0.	0.	0.	0.20	0.	0.	0.25	0.	0.	0.
L	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
R	0.	0.	0.	0.19	0.	0.	0.29	0.	0.	0.
160 A	0.	0.	0.	0.19	0.	0.	0.29	0.	0.	0.
L	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
R	0.	0.	0.	0.20	0.	0.	0.	0.	0.	0.
170 A	0.	0.	0.	0.20	0.	0.	0.	0.	0.	0.
L	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
R	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
180 A	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
L	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.

RADIANCE VALUES ARE IN MICROWATTS. VA AND SA ARE IN DEGREES.

FIGURE 25 CONT.

IR RMS FLUCTUATION AS A FUNCTION OF SUN AZIMUTH

FILTER 2 AT 1013 AST INSOL ANGLE 44.8 DEG
SPECTRAL BAND 2.63 TO 2.80 MICRONS ELEVATION 20.0 KM

VA	0	10	20	30	40	50	60	70	80	90
SA										
R	0.	0.	0.	0.	0.	0.16	0.	0.24	0.	0.
0 A	0.	0.	0.	0.	0.	0.21	0.	0.29	0.	0.
L	0.	0.	0.	0.	0.	0.13	0.	0.16	0.	0.
R	0.	0.	0.	0.	0.	0.24	0.	0.18	0.	0.
10 A	0.	0.	0.	0.	0.	0.29	0.	0.24	0.	0.
L	0.	0.	0.	0.	0.	0.16	0.	0.16	0.	0.
R	0.	0.	0.	0.	0.	0.	0.14	0.18	0.	0.
20 A	0.	0.	0.	0.	0.	0.19	0.14	0.24	0.	0.
L	0.	0.	0.	0.	0.	0.19	0.	0.17	0.	0.
R	0.	0.	0.	0.14	0.	0.	0.15	0.21	0.	0.
30 A	0.	0.	0.	0.14	0.	0.16	0.15	0.27	0.	0.
L	0.	0.	0.	0.	0.	0.16	0.	0.16	0.	0.
R	0.	0.	0.	0.15	0.	0.15	0.16	0.17	0.	0.
40 A	0.	0.	0.	0.15	0.	0.23	0.16	0.22	0.	0.
L	0.	0.	0.	0.	0.	0.17	0.	0.14	0.	0.
R	0.	0.	0.	0.14	0.	0.	0.15	0.14	0.	0.
50 A	0.	0.	0.	0.14	0.	0.16	0.15	0.23	0.	0.
L	0.	0.	0.	0.	0.	0.16	0.	0.18	0.	0.
R	0.	0.	0.	0.14	0.	0.	0.15	0.18	0.	0.
60 A	0.	0.	0.	0.14	0.	0.13	0.15	0.26	0.	0.
L	0.	0.	0.	0.	0.	0.13	0.	0.19	0.	0.

RADIANCE VALUES ARE IN MICROWATTS. VA AND SA ARE IN DEGREES.

FIGURE 26

IR RMS FLUCTUATION AS A FUNCTION OF SUN AZIMUTH

FILTER 2 AT 1013 AST INSOL ANGLE 44.8 DEG
SPECTRAL BAND 2.63 TO 2.80 MICRONS ELEVATION 20.0 KM

VA	0	10	20	30	40	50	60	70	80	90
SA										
R	0.	0.	0.	0.14	0.	0.	0.14	0.17	0.	0.
70 A	0.	0.	0.	0.14	0.	0.13	0.14	0.26	0.	0.
L	0.	0.	0.	0.	0.	0.13	0.	0.19	0.	0.
R	0.	0.	0.	0.14	0.	0.	0.15	0.17	0.	0.
80 A	0.	0.	0.	0.14	0.	0.13	0.15	0.25	0.	0.
L	0.	0.	0.	0.	0.	0.13	0.	0.18	0.	0.
R	0.	0.	0.13	0.14	0.	0.	0.14	0.17	0.	0.
90 A	0.	0.	0.13	0.14	0.	0.14	0.14	0.22	0.	0.
L	0.	0.	0.	0.	0.	0.14	0.	0.14	0.	0.
R	0.	0.	0.	0.13	0.	0.	0.18	0.17	0.	0.
100 A	0.	0.	0.	0.13	0.	0.13	0.18	0.24	0.	0.
L	0.	0.	0.	0.	0.	0.13	0.	0.17	0.	0.
R	0.	0.	0.	0.14	0.	0.	0.18	0.16	0.	0.
110 A	0.	0.	0.	0.14	0.	0.14	0.18	0.21	0.	0.
L	0.	0.	0.	0.	0.	0.14	0.	0.13	0.	0.
R	0.	0.	0.	0.13	0.	0.	0.16	0.15	0.	0.
120 A	0.	0.	0.	0.13	0.	0.14	0.16	0.18	0.	0.
L	0.	0.	0.	0.	0.	0.14	0.	0.10	0.	0.

RADIANCE VALUES ARE IN MICROWATTS. VA AND SA ARE IN DEGREES.

FIGURE 26 CONT.

IR RMS FLUCTUATION AS A FUNCTION OF SUN AZIMUTH

FILTER 2 AT 1013 AST INSOL ANGLE 44.8 DEG
SPECTRAL BAND 2.63 TO 2.80 MICRONS ELEVATION 20.0 KM

	VA	0	10	20	30	40	50	60	70	80	90
SA											
	R	0.	0.	0.	0.13	0.	0.	0.14	0.14	0.	0.
130	A	0.	0.	0.	0.13	0.	0.16	0.14	0.14	0.	0.
	L	0.	0.	0.	0.	0.	0.16	0.	0.	0.	0.
	R	0.	0.	0.	0.14	0.	0.15	0.19	0.13	0.	0.
140	A	0.	0.	0.	0.14	0.	0.15	0.19	0.13	0.	0.
	L	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
	R	0.	0.	0.	0.14	0.	0.	0.20	0.	0.	0.
150	A	0.	0.	0.	0.14	0.	0.	0.20	0.	0.	0.
	L	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
	R	0.	0.	0.	0.12	0.	0.	0.21	0.	0.	0.
160	A	0.	0.	0.	0.12	0.	0.	0.21	0.	0.	0.
	L	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
	R	0.	0.	0.	0.17	0.	0.	0.	0.	0.	0.
170	A	0.	0.	0.	0.17	0.	0.	0.	0.	0.	0.
	L	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
	R	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
180	A	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
	L	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.

RADIANCE VALUES ARE IN MICROWATTS. VA AND SA ARE IN DEGREES.

FIGURE 26 CONT.

IR NUMBER OF OBSERVATIONS AS A FUNCTION OF SCATTERING ANGLE

FILTER 2 AT 1013 AST INSOL ANGLE 44.8 DEG
SPECTRAL BAND 2.63 TO 2.80 MICRONS ELEVATION 20.0 KM

SA	VA	0	10	20	30	40	50	60	70	80	90
0		0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
10		0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
20		0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
30		0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
40		0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
50		0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
60		0.	0.	0.	0.	0.	0.	0.	570.	0.	0.
70		0.	0.	0.	0.	0.	0.	0.	890.	0.	0.
80		0.	0.	0.	0.	0.	0.	280.	576.	0.	0.
90		0.	0.	0.	0.	0.	855.	341.	631.	0.	0.
100		0.	0.	0.	0.	0.	353.	341.	463.	0.	0.
110		0.	0.	0.	429.	0.	267.	313.	494.	0.	0.
120		0.	0.	0.	610.	0.	266.	254.	515.	0.	0.
130		0.	0.	30.	344.	0.	238.	218.	315.	0.	0.
140		0.	0.	0.	448.	0.	251.	278.	30.	0.	0.
150		0.	0.	0.	403.	0.	29.	243.	0.	0.	0.
160		0.	0.	0.	358.	0.	0.	184.	0.	0.	0.
170		0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
180		0.	0.	0.	0.	0.	0.	0.	0.	0.	0.

RADIANCE VALUES ARE IN MICROWATTS. VA AND SA ARE IN DEGREES.

FIGURE 27

IR MEAN RADIANCE AS A FUNCTION OF SCATTERING ANGLE

FILTER 2 AT 1013 AST INSOL ANGLE 44.8 DEG
SPECTRAL BAND 2.63 TO 2.80 MICRONS ELEVATION 20.0 KM

VA	0	10	20	30	40	50	60	70	80	90
SA										
0	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
10	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
20	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
30	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
40	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
50	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
60	0.	0.	0.	0.	0.	0.	0.	0.22	0.	0.
70	0.	0.	0.	0.	0.	0.	0.	0.21	0.	0.
80	0.	0.	0.	0.	0.	0.	0.21	0.21	0.	0.
90	0.	0.	0.	0.	0.	0.23	0.21	0.22	0.	0.
100	0.	0.	0.	0.	0.	0.20	0.20	0.22	0.	0.
110	0.	0.	0.	0.20	0.	0.18	0.19	0.20	0.	0.
120	0.	0.	0.	0.19	0.	0.18	0.22	0.18	0.	0.
130	0.	0.	0.16	0.18	0.	0.19	0.21	0.19	0.	0.
140	0.	0.	0.	0.18	0.	0.19	0.20	0.18	0.	0.
150	0.	0.	0.	0.19	0.	0.30	0.23	0.	0.	0.
160	0.	0.	0.	0.19	0.	0.	0.28	0.	0.	0.
170	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
180	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.

RADIANCE VALUES ARE IN MICROWATTS. VA AND SA ARE IN DEGREES.

FIGURE 28

IR RMS FLUCTUATION AS A FUNCTION OF SCATTERING ANGLE

FILTER 2 AT 1013 AST INSOL ANGLE 44.8 DEG
SPECTRAL BAND 2.63 TO 2.80 MICRONS ELEVATION 20.0 KM

SA	VA	0	10	20	30	40	50	60	70	80	90
0	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
10	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
20	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
30	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
40	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
50	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
60	0.	0.	0.	0.	0.	0.	0.	0.	0.18	0.	0.
70	0.	0.	0.	0.	0.	0.	0.	0.	0.17	0.	0.
80	0.	0.	0.	0.	0.	0.	0.	0.15	0.16	0.	0.
90	0.	0.	0.	0.	0.	0.	0.18	0.16	0.18	0.	0.
100	0.	0.	0.	0.	0.	0.	0.16	0.14	0.17	0.	0.
110	0.	0.	0.	0.14	0.	0.	0.13	0.15	0.17	0.	0.
120	0.	0.	0.	0.14	0.	0.	0.14	0.17	0.15	0.	0.
130	0.	0.	0.13	0.14	0.	0.	0.14	0.17	0.13	0.	0.
140	0.	0.	0.	0.14	0.	0.	0.14	0.16	0.13	0.	0.
150	0.	0.	0.	0.14	0.	0.	0.22	0.19	0.	0.	0.
160	0.	0.	0.	0.13	0.	0.	0.	0.20	0.	0.	0.
170	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
180	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.

RADIANCE VALUES ARE IN MICROWATTS. VA AND SA ARE IN DEGREES.

FIGURE 29

IR NUMBER OF OBSERVATIONS AS A FUNCTION OF SUN AZIMUTH

FILTER 1 AT 1018 AST INSOL ANGLE 44.5 DEG
SPECTRAL BAND 2.50 TO 2.80 MICRONS ELEVATION 21.0 KM

VA SA	0	10	20	30	40	50	60	70	80	90
R	0.	0.	0.	0.	0.	104.	89.	0.	0.	0.
0 A	0.	0.	0.	0.	0.	104.	82.	0.	0.	0.
L	0.	0.	0.	0.	0.	104.	75.	0.	0.	0.
R	0.	0.	0.	0.	0.	120.	120.	0.	0.	0.
10 A	0.	0.	0.	0.	0.	120.	149.	0.	0.	0.
L	0.	0.	0.	0.	0.	120.	178.	0.	0.	0.
R	0.	0.	15.	44.	0.	0.	0.	120.	0.	0.
20 A	0.	0.	8.	22.	0.	90.	75.	60.	0.	0.
L	0.	0.	0.	0.	0.	179.	149.	0.	0.	0.
R	0.	0.	30.	134.	0.	0.	0.	165.	0.	0.
30 A	0.	0.	15.	67.	0.	82.	90.	83.	0.	0.
L	0.	0.	0.	0.	0.	164.	180.	0.	0.	0.
R	0.	0.	60.	75.	0.	0.	0.	150.	0.	0.
40 A	0.	0.	30.	38.	0.	83.	90.	75.	0.	0.
L	0.	0.	0.	0.	0.	165.	179.	0.	0.	0.
R	0.	0.	45.	44.	0.	0.	0.	133.	0.	0.
50 A	0.	0.	23.	22.	0.	45.	89.	67.	0.	0.
L	0.	0.	0.	0.	0.	89.	178.	0.	0.	0.
R	0.	0.	0.	179.	0.	0.	0.	135.	0.	0.
60 A	0.	0.	0.	90.	0.	0.	52.	68.	0.	0.
L	0.	0.	0.	0.	0.	0.	104.	0.	0.	0.

RADIANCE VALUES ARE IN MICROWATTS. VA AND SA ARE IN DEGREES.

FIGURE 30

IR NUMBER OF OBSERVATIONS AS A FUNCTION OF SUN AZIMUTH

FILTER 1 AT 1018 AST INSOL ANGLE 44.5 DEG
SPECTRAL BAND 2.50 TO 2.80 MICRONS ELEVATION 21.0 KM

VA SA	0	10	20	30	40	50	60	70	80	90
R	0.	0.	15.	89.	0.	0.	0.	149.	0.	0.
70 A	0.	0.	8.	45.	0.	45.	83.	75.	0.	0.
L	0.	0.	0.	0.	0.	90.	165.	0.	0.	0.
R	0.	0.	0.	193.	0.	0.	0.	165.	0.	0.
80 A	0.	0.	0.	97.	0.	112.	75.	83.	0.	0.
L	0.	0.	0.	0.	0.	223.	149.	0.	0.	0.
R	0.	0.	0.	149.	0.	0.	0.	135.	0.	0.
90 A	0.	0.	0.	75.	0.	90.	105.	68.	0.	0.
L	0.	0.	0.	0.	0.	180.	209.	0.	0.	0.
R	0.	0.	30.	150.	0.	0.	0.	194.	0.	0.
100 A	0.	0.	15.	75.	0.	74.	68.	97.	0.	0.
L	0.	0.	0.	0.	0.	148.	135.	0.	0.	0.
R	0.	0.	0.	192.	0.	0.	0.	120.	0.	0.
110 A	0.	0.	0.	96.	0.	60.	75.	60.	0.	0.
L	0.	0.	0.	0.	0.	120.	149.	0.	0.	0.
R	0.	0.	0.	150.	0.	0.	0.	194.	0.	0.
120 A	0.	0.	0.	75.	0.	90.	97.	97.	0.	0.
L	0.	0.	0.	0.	0.	180.	193.	0.	0.	0.

RADIANCE VALUES ARE IN MICROWATTS. VA AND SA ARE IN DEGREES.

FIGURE 30 CONT.

IR NUMBER OF OBSERVATIONS AS A FUNCTION OF SUN AZIMUTH

FILTER 1 AT 1018 AST INSOL ANGLE 44.5 DEG
SPECTRAL BAND 2.50 TO 2.80 MICRONS ELEVATION 21.0 KM

VA SA	0	10	20	30	40	50	60	70	80	90
R	0.	0.	0.	195.	0.	0.	0.	180.	0.	0.
130 A	0.	0.	0.	98.	0.	15.	60.	90.	0.	0.
L	0.	0.	0.	0.	0.	30.	120.	0.	0.	0.
R	0.	0.	29.	104.	0.	0.	0.	180.	0.	0.
140 A	0.	0.	15.	52.	0.	0.	0.	90.	0.	0.
L	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
R	0.	0.	0.	193.	0.	0.	0.	195.	0.	0.
150 A	0.	0.	0.	97.	0.	0.	0.	98.	0.	0.
L	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
R	0.	0.	0.	163.	0.	0.	0.	150.	0.	0.
160 A	0.	0.	0.	82.	0.	0.	0.	75.	0.	0.
L	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
R	0.	0.	0.	15.	0.	0.	0.	0.	0.	0.
170 A	0.	0.	0.	8.	0.	0.	0.	0.	0.	0.
L	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
R	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
180 A	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
L	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.

RADIANCE VALUES ARE IN MICROWATTS. VA AND SA ARE IN DEGREES.

FIGURE 30 CONT.

IR MEAN RADIANCE AS A FUNCTION OF SUN AZIMUTH

FILTER 1 AT 1018 AST INSOL ANGLE 44.5 DEG
SPECTRAL BAND 2.50 TO 2.80 MICRONS ELEVATION 21.0 KM

VA	0	10	20	30	40	50	60	70	80	90
SA										
R	0.	0.	0.	0.	0.	0.52	0.21	0.	0.	0.
0 A	0.	0.	0.	0.	0.	0.35	0.75	0.	0.	0.
L	0.	0.	0.	0.	0.	0.18	0.35	0.	0.	0.
R	0.	0.	0.	0.	0.	0.42	0.28	0.	0.	0.
10 A	0.	0.	0.	0.	0.	0.30	0.32	0.	0.	0.
L	0.	0.	0.	0.	0.	0.18	0.35	0.	0.	0.
R	0.	0.	0.80	0.47	0.	0.	0.	0.37	0.	0.
20 A	0.	0.	0.80	0.47	0.	0.19	0.19	0.37	0.	0.
L	0.	0.	0.	0.	0.	0.19	0.19	0.	0.	0.
R	0.	0.	0.28	0.24	0.	0.	0.	0.20	0.	0.
30 A	0.	0.	0.28	0.24	0.	0.32	0.27	0.20	0.	0.
L	0.	0.	0.	0.	0.	0.32	0.27	0.	0.	0.
R	0.	0.	0.17	0.27	0.	0.	0.	0.55	0.	0.
40 A	0.	0.	0.17	0.27	0.	0.27	0.34	0.55	0.	0.
L	0.	0.	0.	0.	0.	0.27	0.34	0.	0.	0.
R	0.	0.	0.19	0.18	0.	0.	0.	0.40	0.	0.
50 A	0.	0.	0.19	0.18	0.	0.30	0.90	0.40	0.	0.
L	0.	0.	0.	0.	0.	0.30	0.90	0.	0.	0.
R	0.	0.	0.	0.18	0.	0.	0.	0.22	0.	0.
60 A	0.	0.	0.	0.18	0.	0.	0.41	0.22	0.	0.
L	0.	0.	0.	0.	0.	0.	0.41	0.	0.	0.

RADIANCE VALUES ARE IN MICROWATTS. VA AND SA ARE IN DEGREES.

FIGURE 31

IR MEAN RADIANCE AS A FUNCTION OF SUN AZIMUTH

FILTER 1 AT 1018 AST INSOL ANGLE 44.5 DEG
SPECTRAL BAND 2.50 TO 2.80 MICRONS ELEVATION 21.0 KM

VA	0	10	20	30	40	50	60	70	80	90
SA										
R	0.	0.	0.18	0.19	0.	0.	0.	0.29	0.	0.
70 A	0.	0.	0.18	0.19	0.	0.22	0.65	0.29	0.	0.
L	0.	0.	0.	0.	0.	0.22	0.65	0.	0.	0.
R	0.	0.	0.	0.21	0.	0.	0.	0.33	0.	0.
80 A	0.	0.	0.	0.21	0.	0.17	0.47	0.33	0.	0.
L	0.	0.	0.	0.	0.	0.17	0.47	0.	0.	0.
R	0.	0.	0.	0.18	0.	0.	0.	0.36	0.	0.
90 A	0.	0.	0.	0.18	0.	0.19	0.80	0.36	0.	0.
L	0.	0.	0.	0.	0.	0.19	0.80	0.	0.	0.
R	0.	0.	0.21	0.20	0.	0.	0.	0.48	0.	0.
100 A	0.	0.	0.21	0.20	0.	0.19	0.99	0.48	0.	0.
L	0.	0.	0.	0.	0.	0.19	0.99	0.	0.	0.
R	0.	0.	0.	0.21	0.	0.	0.	0.71	0.	0.
110 A	0.	0.	0.	0.21	0.	0.16	0.98	0.71	0.	0.
L	0.	0.	0.	0.	0.	0.16	0.98	0.	0.	0.
R	0.	0.	0.	0.16	0.	0.	0.	0.69	0.	0.
120 A	0.	0.	0.	0.16	0.	0.17	0.55	0.69	0.	0.
L	0.	0.	0.	0.	0.	0.17	0.55	0.	0.	0.

RADIANCE VALUES ARE IN MICROWATTS. VA AND SA ARE IN DEGREES.

FIGURE 31 CONT.

IR MEAN RADIANCE AS A FUNCTION OF SUN AZIMUTH

FILTER 1 AT 1018 AST INSOL ANGLE 44.5 DEG
SPECTRAL BAND 2.50 TO 2.80 MICRONS ELEVATION 21.0 KM

VA	0	10	20	30	40	50	60	70	80	90
SA										
R	0.	0.	0.	0.17	0.	0.	0.	0.52	0.	0.
130 A	0.	0.	0.	0.17	0.	0.17	0.38	0.52	0.	0.
L	0.	0.	0.	0.	0.	0.17	0.38	0.	0.	0.
R	0.	0.	0.16	0.18	0.	0.	0.	0.49	0.	0.
140 A	0.	0.	0.16	0.18	0.	0.	0.	0.49	0.	0.
L	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
R	0.	0.	0.	0.16	0.	0.	0.	0.54	0.	0.
150 A	0.	0.	0.	0.16	0.	0.	0.	0.54	0.	0.
L	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
R	0.	0.	0.	0.19	0.	0.	0.	0.61	0.	0.
160 A	0.	0.	0.	0.19	0.	0.	0.	0.61	0.	0.
L	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
R	0.	0.	0.	0.15	0.	0.	0.	0.	0.	0.
170 A	0.	0.	0.	0.15	0.	0.	0.	0.	0.	0.
L	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
R	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
180 A	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
L	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.

RADIANCE VALUES ARE IN MICROWATTS. VA AND SA ARE IN DEGREES.

FIGURE 31 CONT.

IR RMS FLUCTUATION AS A FUNCTION OF SUN AZIMUTH

FILTER 1 AT 1018 AST INSOL ANGLE 44.5 DEG
SPECTRAL BAND 2.50 TO 2.80 MICRONS ELEVATION 21.0 KM

VA SA	0	10	20	30	40	50	60	70	80	90
R	0.	0.	0.	0.	0.	0.40	0.16	0.	0.	0.
A	0.	0.	0.	0.	0.	0.43	0.26	0.	0.	0.
L	0.	0.	0.	0.	0.	0.16	0.20	0.	0.	0.
R	0.	0.	0.	0.	0.	0.27	0.20	0.	0.	0.
10 A	0.	0.	0.	0.	0.	0.30	0.29	0.	0.	0.
L	0.	0.	0.	0.	0.	0.13	0.21	0.	0.	0.
R	0.	0.	0.27	0.26	0.	0.	0.	0.21	0.	0.
20 A	0.	0.	0.27	0.26	0.	0.13	0.15	0.21	0.	0.
L	0.	0.	0.	0.	0.	0.13	0.15	0.	0.	0.
R	0.	0.	0.16	0.15	0.	0.	0.	0.15	0.	0.
30 A	0.	0.	0.16	0.15	0.	0.20	0.19	0.15	0.	0.
L	0.	0.	0.	0.	0.	0.20	0.19	0.	0.	0.
R	0.	0.	0.11	0.18	0.	0.	0.	0.41	0.	0.
40 A	0.	0.	0.11	0.18	0.	0.19	0.24	0.41	0.	0.
L	0.	0.	0.	0.	0.	0.19	0.24	0.	0.	0.
R	0.	0.	0.14	0.11	0.	0.	0.	0.32	0.	0.
50 A	0.	0.	0.14	0.11	0.	0.19	0.34	0.32	0.	0.
L	0.	0.	0.	0.	0.	0.19	0.34	0.	0.	0.
R	0.	0.	0.	0.14	0.	0.	0.	0.15	0.	0.
60 A	0.	0.	0.	0.14	0.	0.	0.23	0.15	0.	0.
L	0.	0.	0.	0.	0.	0.	0.23	0.	0.	0.

RADIANCE VALUES ARE IN MICROWATTS. VA AND SA ARE IN DEGREES.

FIGURE 32

IR RMS FLUCTUATION AS A FUNCTION OF SUN AZIMUTH

FILTER 1 AT 1018 AST INSOL ANGLE 44.5 DEG
SPECTRAL BAND 2.50 TO 2.80 MICRONS ELEVATION 21.0 KM

VA	0	10	20	30	40	50	60	70	80	90
SA										
R	0.	0.	0.21	0.16	0.	0.	0.	0.19	0.	0.
70 A	0.	0.	0.21	0.16	0.	0.15	0.23	0.19	0.	0.
L	0.	0.	0.	0.	0.	0.15	0.23	0.	0.	0.
R	0.	0.	0.	0.14	0.	0.	0.	0.19	0.	0.
80 A	0.	0.	0.	0.14	0.	0.13	0.20	0.19	0.	0.
L	0.	0.	0.	0.	0.	0.13	0.20	0.	0.	0.
R	0.	0.	0.	0.14	0.	0.	0.	0.21	0.	0.
90 A	0.	0.	0.	0.14	0.	0.14	0.27	0.21	0.	0.
L	0.	0.	0.	0.	0.	0.14	0.27	0.	0.	0.
R	0.	0.	0.16	0.14	0.	0.	0.	0.24	0.	0.
100 A	0.	0.	0.16	0.14	0.	0.15	0.24	0.24	0.	0.
L	0.	0.	0.	0.	0.	0.15	0.24	0.	0.	0.
R	0.	0.	0.	0.14	0.	0.	0.	0.25	0.	0.
110 A	0.	0.	0.	0.14	0.	0.13	0.28	0.25	0.	0.
L	0.	0.	0.	0.	0.	0.13	0.28	0.	0.	0.
R	0.	0.	0.	0.13	0.	0.	0.	0.26	0.	0.
120 A	0.	0.	0.	0.13	0.	0.14	0.27	0.26	0.	0.
L	0.	0.	0.	0.	0.	0.14	0.27	0.	0.	0.

RADIANCE VALUES ARE IN MICROWATTS. VA AND SA ARE IN DEGREES.

FIGURE 32 CONT.

IR RMS FLUCTUATION AS A FUNCTION OF SUN AZINUTH

FILTER 1 AT 1018 AST INSOL ANGLE 44.5 DEG
SPECTRAL BAND 2.50 TO 2.80 MICRONS ELEVATION 21.0 KM

	VA	0	10	20	30	40	50	60	70	80	90
SA											
	R	0.	0.	0.	0.13	0.	0.	0.	0.21	0.	0.
130	A	0.	0.	0.	0.13	0.	0.12	0.22	0.21	0.	0.
	L	0.	0.	0.	0.	0.	0.12	0.22	0.	0.	0.
	R	0.	0.	0.13	0.13	0.	0.	0.	0.22	0.	0.
140	A	0.	0.	0.13	0.13	0.	0.	0.	0.22	0.	0.
	L	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
	R	0.	0.	0.	0.13	0.	0.	0.	0.24	0.	0.
150	A	0.	0.	0.	0.13	0.	0.	0.	0.24	0.	0.
	L	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
	R	0.	0.	0.	0.14	0.	0.	0.	0.24	0.	0.
160	A	0.	0.	0.	0.14	0.	0.	0.	0.24	0.	0.
	L	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
	R	0.	0.	0.	0.09	0.	0.	0.	0.	0.	0.
170	A	0.	0.	0.	0.09	0.	0.	0.	0.	0.	0.
	L	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
	R	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
180	A	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
	L	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.

RADIANCE VALUES ARE IN MICROWATTS. VA AND SA ARE IN DEGREES.

FIGURE 32 CONT.

IR NUMBER OF OBSERVATIONS AS A FUNCTION OF SCATTERING ANGLE

FILTER 1 AT 1018 AST INSOL ANGLE 44.5 DEG
SPECTRAL BAND 2.50 TO 2.80 MICRONS ELEVATION 21.0 KM

SA	VA	0	10	20	30	40	50	60	70	80	90
0		0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
10		0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
20		0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
30		0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
40		0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
50		0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
60		0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
70		0.	0.	0.	0.	0.	0.	552.	390.	0.	0.
80		0.	0.	0.	0.	0.	0.	493.	283.	0.	0.
90		0.	0.	0.	0.	0.	911.	252.	194.	0.	0.
100		0.	0.	0.	0.	0.	134.	224.	240.	0.	0.
110		0.	0.	60.	253.	0.	284.	314.	269.	0.	0.
120		0.	0.	105.	370.	0.	343.	194.	194.	0.	0.
130		0.	0.	15.	374.	0.	149.	283.	270.	0.	0.
140		0.	0.	15.	402.	0.	195.	60.	330.	0.	0.
150		0.	0.	29.	402.	0.	0.	0.	195.	0.	0.
160		0.	0.	0.	268.	0.	0.	0.	0.	0.	0.
170		0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
180		0.	0.	0.	0.	0.	0.	0.	0.	0.	0.

RADIANCE VALUES ARE IN MICROWATTS. VA AND SA ARE IN DEGREES.

FIGURE 33

IR MEAN RADIANCE AS A FUNCTION OF SCATTERING ANGLE

FILTER 1 AT 1018 AST INSOL ANGLE 44.5 DEG
SPECTRAL BAND 2.50 TO 2.80 MICRONS ELEVATION 21.0 KM

VA	0	10	20	30	40	50	60	70	80	90
SA										
0	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
10	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
20	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
30	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
40	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
50	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
60	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
70	0.	0.	0.	0.	0.	0.	0.29	0.30	0.	0.
80	0.	0.	0.	0.	0.	0.	0.38	0.41	0.	0.
90	0.	0.	0.	0.	0.	0.29	0.66	0.28	0.	0.
100	0.	0.	0.	0.	0.	0.26	0.56	0.34	0.	0.
110	0.	0.	0.38	0.29	0.	0.19	0.79	0.48	0.	0.
120	0.	0.	0.18	0.19	0.	0.19	1.02	0.75	0.	0.
130	0.	0.	0.19	0.19	0.	0.16	0.55	0.54	0.	0.
140	0.	0.	0.23	0.19	0.	0.18	0.32	0.51	0.	0.
150	0.	0.	0.16	0.17	0.	0.	0.	0.60	0.	0.
160	0.	0.	0.	0.18	0.	0.	0.	0.	0.	0.
170	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
180	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.

RADIANCE VALUES ARE IN MICROWATTS. VA AND SA ARE IN DEGREES.

FIGURE 34

IR RMS FLUCTUATION AS A FUNCTION OF SCATTERING ANGLE

FILTER 1 AT 1018 AST INSOL ANGLE 44.5 DEG
SPECTRAL BAND 2.50 TO 2.80 MICRONS ELEVATION 21.0 KM

SA	VA	0	10	20	30	40	50	60	70	80	90
0	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
10	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
20	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
30	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
40	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
50	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
60	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
70	0.	0.	0.	0.	0.	0.	0.	0.20	0.26	0.	0.
80	0.	0.	0.	0.	0.	0.	0.	0.32	0.34	0.	0.
90	0.	0.	0.	0.	0.	0.	0.25	0.35	0.18	0.	0.
100	0.	0.	0.	0.	0.	0.	0.19	0.25	0.20	0.	0.
110	0.	0.	0.31	0.20	0.	0.	0.14	0.29	0.24	0.	0.
120	0.	0.	0.14	0.15	0.	0.	0.14	0.25	0.25	0.	0.
130	0.	0.	0.14	0.14	0.	0.	0.12	0.28	0.22	0.	0.
140	0.	0.	0.17	0.14	0.	0.	0.14	0.19	0.23	0.	0.
150	0.	0.	0.13	0.13	0.	0.	0.	0.	0.24	0.	0.
160	0.	0.	0.	0.13	0.	0.	0.	0.	0.	0.	0.
170	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
180	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.

RADIANCE VALUES ARE IN MICROWATTS. VA AND SA ARE IN DEGREES.

FIGURE 35

IR NUMBER OF OBSERVATIONS AS A FUNCTION OF SUN AZIMUTH

FILTER 10 AT 1029 AST INSOL ANGLE 44.1 DEG
SPECTRAL BAND 3.95 TO 4.80 MICRONS ELEVATION 23.4 KM

VA SA	0	10	20	30	40	50	60	70	80	90
R	0.	0.	0.	0.	0.	75.	0.	45.	0.	0.
0 A	0.	0.	0.	0.	0.	98.	0.	75.	0.	0.
L	0.	0.	0.	0.	0.	120.	0.	105.	0.	0.
R	0.	0.	0.	0.	0.	75.	0.	255.	0.	0.
10 A	0.	0.	0.	0.	0.	120.	0.	218.	0.	0.
L	0.	0.	0.	0.	0.	165.	0.	180.	0.	0.
R	0.	0.	30.	165.	0.	105.	45.	165.	0.	0.
20 A	0.	0.	15.	83.	0.	143.	23.	171.	0.	0.
L	0.	0.	0.	0.	0.	180.	0.	177.	0.	0.
R	0.	0.	0.	210.	0.	105.	15.	195.	0.	0.
30 A	0.	0.	0.	105.	0.	127.	8.	180.	0.	0.
L	0.	0.	0.	0.	0.	149.	0.	165.	0.	0.
R	0.	0.	0.	195.	0.	59.	165.	150.	0.	0.
40 A	0.	0.	0.	98.	0.	127.	83.	165.	0.	0.
L	0.	0.	0.	0.	0.	195.	0.	180.	0.	0.
R	0.	0.	15.	179.	0.	75.	150.	180.	0.	0.
50 A	0.	0.	8.	90.	0.	143.	75.	173.	0.	0.
L	0.	0.	0.	0.	0.	210.	0.	165.	0.	0.
R	0.	0.	0.	210.	0.	90.	105.	210.	0.	0.
60 A	0.	0.	0.	105.	0.	150.	53.	180.	0.	0.
L	0.	0.	0.	0.	0.	210.	0.	150.	0.	0.

RADIANCE VALUES ARE IN MICROWATTS. VA AND SA ARE IN DEGREES.

FIGURE 36

IR NUMBER OF OBSERVATIONS AS A FUNCTION OF SUN AZIMUTH

FILTER 10 AT 1029 AST INSOL ANGLE 44.1 DEG
SPECTRAL BAND 3.95 TO 4.80 MICRONS ELEVATION 23.4 KM

VA	0	10	20	30	40	50	60	70	80	90
SA										
R	0.	0.	15.	195.	0.	149.	75.	180.	0.	0.
70 A	0.	0.	8.	98.	0.	172.	38.	188.	0.	0.
L	0.	0.	0.	0.	0.	195.	0.	195.	0.	0.
R	0.	0.	45.	75.	0.	60.	134.	165.	0.	0.
80 A	0.	0.	23.	38.	0.	143.	67.	165.	0.	0.
L	0.	0.	0.	0.	0.	225.	0.	165.	0.	0.
R	0.	0.	0.	195.	0.	105.	105.	180.	0.	0.
90 A	0.	0.	0.	98.	0.	143.	53.	173.	0.	0.
L	0.	0.	0.	0.	0.	180.	0.	165.	0.	0.
R	0.	0.	0.	180.	0.	120.	60.	195.	0.	0.
100 A	0.	0.	0.	90.	0.	165.	30.	195.	0.	0.
L	0.	0.	0.	0.	0.	210.	0.	195.	0.	0.
R	0.	0.	0.	180.	0.	135.	90.	150.	0.	0.
110 A	0.	0.	0.	90.	0.	165.	45.	173.	0.	0.
L	0.	0.	0.	0.	0.	195.	0.	195.	0.	0.
R	0.	0.	0.	150.	0.	120.	75.	180.	0.	0.
120 A	0.	0.	0.	75.	0.	165.	38.	158.	0.	0.
L	0.	0.	0.	0.	0.	209.	0.	135.	0.	0.

RADIANCE VALUES ARE IN MICROWATTS. VA AND SA ARE IN DEGREES.

FIGURE 36 CONT.

IR NUMBER OF OBSERVATIONS AS A FUNCTION OF SUN AZIMUTH

FILTER 10 AT 1029 AST INSOL ANGLE 44.1 DEG
SPECTRAL BAND 3.95 TO 4.80 MICRONS ELEVATION 23.4 KM

	VA	0	10	20	30	40	50	60	70	80	90
SA											
R		0.	0.	0.	195.	0.	134.	60.	90.	0.	0.
130 A		0.	0.	0.	98.	0.	127.	30.	128.	0.	0.
L		0.	0.	0.	0.	0.	120.	0.	165.	0.	0.
R		0.	0.	0.	195.	0.	150.	58.	210.	0.	0.
140 A		0.	0.	0.	98.	0.	75.	29.	105.	0.	0.
L		0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
R		0.	0.	0.	180.	0.	90.	105.	180.	0.	0.
150 A		0.	0.	0.	90.	0.	45.	53.	90.	0.	0.
L		0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
R		0.	0.	0.	75.	0.	60.	30.	150.	0.	0.
160 A		0.	0.	0.	38.	0.	30.	15.	75.	0.	0.
L		0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
R		0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
170 A		0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
L		0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
R		0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
180 A		0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
L		0.	0.	0.	0.	0.	0.	0.	0.	0.	0.

RADIANCE VALUES ARE IN MICROWATTS. VA AND SA ARE IN DEGREES.

FIGURE 36 CONT.

IR MEAN RADIANCE AS A FUNCTION OF SUN AZIMUTH

FILTER 10 AT 1029 AST INSOL ANGLE 44.1 DEG
SPECTRAL BAND 3.95 TO 4.80 MICRONS ELEVATION 23.4 KM

VA	0	10	20	30	40	50	60	70	80	90
SA										
R	0.	0.	0.	0.	0.	21.20	0.	13.37	0.	0.
0 A	0.	0.	0.	0.	0.	21.55	0.	13.39	0.	0.
L	0.	0.	0.	0.	0.	21.77	0.	13.39	0.	0.
R	0.	0.	0.	0.	0.	18.48	0.	12.92	0.	0.
10 A	0.	0.	0.	0.	0.	19.97	0.	12.98	0.	0.
L	0.	0.	0.	0.	0.	20.65	0.	13.07	0.	0.
R	0.	0.	24.39	25.58	0.	15.60	13.97	12.93	0.	0.
20 A	0.	0.	24.39	25.58	0.	17.72	13.97	12.99	0.	0.
L	0.	0.	0.	0.	0.	18.95	0.	13.05	0.	0.
R	0.	0.	0.	24.26	0.	15.18	15.16	13.13	0.	0.
30 A	0.	0.	0.	24.26	0.	21.24	15.16	12.93	0.	0.
L	0.	0.	0.	0.	0.	25.50	0.	12.70	0.	0.
R	0.	0.	0.	22.12	0.	13.58	13.25	13.51	0.	0.
40 A	0.	0.	0.	22.12	0.	25.21	13.25	13.19	0.	0.
L	0.	0.	0.	0.	0.	28.72	0.	12.93	0.	0.
R	0.	0.	20.12	21.28	0.	13.40	13.68	13.31	0.	0.
50 A	0.	0.	20.12	21.28	0.	15.79	13.68	13.24	0.	0.
L	0.	0.	0.	0.	0.	16.65	0.	13.17	0.	0.
R	0.	0.	0.	28.65	0.	14.15	13.76	12.51	0.	0.
60 A	0.	0.	0.	28.65	0.	15.48	13.76	12.77	0.	0.
L	0.	0.	0.	0.	0.	16.06	0.	13.13	0.	0.

RADIANCE VALUES ARE IN MICROWATTS. VA AND SA ARE IN DEGREES.

FIGURE 37

IR MEAN RADIANCE AS A FUNCTION OF SUN AZIMUTH

FILTER 10 AT 1029 AST INSOL ANGLE 44.1 DEG
SPECTRAL BAND 3.95 TO 4.80 MICRONS ELEVATION 23.4 KM

VA	0	10	20	30	40	50	60	70	80	90
SA										
R	0.	0.	32.59	33.01	0.	13.38	13.63	13.56	0.	0.
70 A	0.	0.	32.59	33.01	0.	18.72	13.63	13.36	0.	0.
L	0.	0.	0.	0.	0.	22.79	0.	13.19	0.	0.
R	0.	0.	32.84	32.76	0.	12.76	12.98	13.19	0.	0.
80 A	0.	0.	32.84	32.76	0.	21.33	12.98	13.31	0.	0.
L	0.	0.	0.	0.	0.	23.61	0.	13.43	0.	0.
R	0.	0.	0.	33.97	0.	12.82	12.67	12.69	0.	0.
90 A	0.	0.	0.	33.97	0.	18.29	12.67	13.24	0.	0.
L	0.	0.	0.	0.	0.	21.48	0.	13.85	0.	0.
R	0.	0.	0.	32.74	0.	13.31	13.74	13.74	0.	0.
100 A	0.	0.	0.	32.74	0.	16.75	13.74	13.87	0.	0.
L	0.	0.	0.	0.	0.	18.72	0.	14.00	0.	0.
R	0.	0.	0.	28.34	0.	14.31	12.87	12.81	0.	0.
110 A	0.	0.	0.	28.34	0.	15.23	12.87	13.46	0.	0.
L	0.	0.	0.	0.	0.	15.87	0.	13.97	0.	0.
R	0.	0.	0.	17.61	0.	14.27	13.20	12.74	0.	0.
120 A	0.	0.	0.	17.61	0.	14.83	13.20	13.02	0.	0.
L	0.	0.	0.	0.	0.	15.15	0.	13.40	0.	0.

RADIANCE VALUES ARE IN MICROWATTS. VA AND SA ARE IN DEGREES.

FIGURE 37 CONT.

IR MEAN RADIANCE AS A FUNCTION OF SUN AZIMUTH

FILTER 10 AT 1029 AST INSOL ANGLE 44.1 DEG
SPECTRAL BAND 3.95 TO 4.80 MICRONS ELEVATION 23.4 KM

	VA	0	10	20	30	40	50	60	70	80	90
SA											
	R	0.	0.	0.	12.72	0.	13.71	13.09	13.16	0.	0.
130	A	0.	0.	0.	12.72	0.	14.19	13.09	13.13	0.	0.
	L	0.	0.	0.	0.	0.	14.74	0.	13.11	0.	0.
	R	0.	0.	0.	18.49	0.	14.05	14.75	13.31	0.	0.
140	A	0.	0.	0.	18.49	0.	14.05	14.75	13.31	0.	0.
	L	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
	R	0.	0.	0.	27.30	0.	17.52	17.60	13.50	0.	0.
150	A	0.	0.	0.	27.30	0.	17.52	17.60	13.50	0.	0.
	L	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
	R	0.	0.	0.	18.66	0.	14.36	15.37	13.57	0.	0.
160	A	0.	0.	0.	18.66	0.	14.36	15.37	13.57	0.	0.
	L	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
	R	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
170	A	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
	L	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
	R	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
180	A	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
	L	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.

RADIANCE VALUES ARE IN MICROWATTS. VA AND SA ARE IN DEGREES.

FIGURE 37 CONT.

IR RMS FLUCTUATION AS A FUNCTION OF SUN AZIMUTH

FILTER 10 AT 1029 AST INSOL ANGLE 44.1 DEG
SPECTRAL BAND 3.95 TO 4.80 MICRONS ELEVATION 23.4 KM

VA	0	10	20	30	40	50	60	70	80	90
SA										
R	0.	0.	0.	0.	0.	1.66	0.	1.04	0.	0.
0 A	0.	0.	0.	0.	0.	2.20	0.	1.44	0.	0.
L	0.	0.	0.	0.	0.	1.44	0.	0.99	0.	0.
R	0.	0.	0.	0.	0.	1.17	0.	1.01	0.	0.
10 A	0.	0.	0.	0.	0.	2.17	0.	1.41	0.	0.
L	0.	0.	0.	0.	0.	1.83	0.	0.99	0.	0.
R	0.	0.	0.92	1.72	0.	1.79	1.30	1.07	0.	0.
20 A	0.	0.	0.92	1.72	0.	2.84	1.30	1.51	0.	0.
L	0.	0.	0.	0.	0.	2.20	0.	1.06	0.	0.
R	0.	0.	0.	1.48	0.	1.82	1.13	1.07	0.	0.
30 A	0.	0.	0.	1.48	0.	3.61	1.13	1.49	0.	0.
L	0.	0.	0.	0.	0.	3.11	0.	1.03	0.	0.
R	0.	0.	0.	1.26	0.	1.21	1.11	1.04	0.	0.
40 A	0.	0.	0.	1.26	0.	2.21	1.11	1.45	0.	0.
L	0.	0.	0.	0.	0.	1.85	0.	1.01	0.	0.
R	0.	0.	1.09	1.42	0.	2.08	2.10	1.04	0.	0.
50 A	0.	0.	1.09	1.42	0.	4.15	2.10	1.46	0.	0.
L	0.	0.	0.	0.	0.	3.59	0.	1.03	0.	0.
R	0.	0.	0.	3.70	0.	1.46	1.48	1.02	0.	0.
60 A	0.	0.	0.	3.70	0.	3.85	1.48	1.44	0.	0.
L	0.	0.	0.	0.	0.	3.56	0.	1.03	0.	0.

RADIANCE VALUES ARE IN MICROWATTS. VA AND SA ARE IN DEGREES.

FIGURE 38

IR RMS FLUCTUATION AS A FUNCTION OF SUN AZIMUTH

FILTER 10 AT 1029 AST INSOL ANGLE 44.1 DEG
SPECTRAL BAND 3.95 TO 4.80 MICRONS ELEVATION 23.4 KM

	VA	0	10	20	30	40	50	60	70	80	90
SA											
	R	0.	0.	0.25	0.35	0.	1.51	1.91	1.26	0.	0.
70	A	0.	0.	0.25	0.35	0.	1.89	1.91	1.64	0.	0.
	L	0.	0.	0.	0.	0.	1.13	0.	1.05	0.	0.
	R	0.	0.	0.37	0.29	0.	1.08	1.16	1.15	0.	0.
80	A	0.	0.	0.37	0.29	0.	1.51	1.16	1.53	0.	0.
	L	0.	0.	0.	0.	0.	1.06	0.	1.01	0.	0.
	R	0.	0.	0.	0.64	0.	1.10	1.00	1.03	0.	0.
90	A	0.	0.	0.	0.64	0.	1.61	1.00	1.44	0.	0.
	L	0.	0.	0.	0.	0.	1.18	0.	1.01	0.	0.
	R	0.	0.	0.	0.81	0.	1.39	1.60	1.04	0.	0.
100	A	0.	0.	0.	0.81	0.	1.84	1.60	1.45	0.	0.
	L	0.	0.	0.	0.	0.	1.21	0.	1.01	0.	0.
	R	0.	0.	0.	2.29	0.	1.70	1.10	1.03	0.	0.
110	A	0.	0.	0.	2.29	0.	2.05	1.10	1.41	0.	0.
	L	0.	0.	0.	0.	0.	1.15	0.	0.96	0.	0.
	R	0.	0.	0.	3.84	0.	1.43	1.21	1.06	0.	0.
120	A	0.	0.	0.	3.84	0.	1.75	1.21	1.49	0.	0.
	L	0.	0.	0.	0.	0.	1.01	0.	1.04	0.	0.

RADIANCE VALUES ARE IN MICROWATTS. VA AND SA ARE IN DEGREES.

FIGURE 38 CONT.

IR RMS FLUCTUATION AS A FUNCTION OF SUN AZIMUTH

FILTER 10 AT 1029 AST INSOL ANGLE 44.1 DEG
SPECTRAL BAND 3.95 TO 4.80 MICRONS ELEVATION 23.4 KM

	VA	0	10	20	30	40	50	60	70	80	90
SA											
	R	0.	0.	0.	1.03	0.	1.59	1.30	1.00	0.	0.
130	A	0.	0.	0.	1.03	0.	1.84	1.30	1.41	0.	0.
	L	0.	0.	0.	0.	0.	0.92	0.	1.00	0.	0.
	R	0.	0.	0.	4.46	0.	1.95	2.10	0.99	0.	0.
140	A	0.	0.	0.	4.46	0.	1.95	2.10	0.99	0.	0.
	L	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
	R	0.	0.	0.	2.38	0.	1.16	1.09	1.00	0.	0.
150	A	0.	0.	0.	2.38	0.	1.16	1.09	1.00	0.	0.
	L	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
	R	0.	0.	0.	0.97	0.	2.50	2.76	1.03	0.	0.
160	A	0.	0.	0.	0.97	0.	2.50	2.76	1.03	0.	0.
	L	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
	R	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
170	A	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
	L	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
	R	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
180	A	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
	L	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.

RADIANCE VALUES ARE IN MICROWATTS. VA AND SA ARE IN DEGREES.

FIGURE 38 CONT.

IR NUMBER OF OBSERVATIONS AS A FUNCTION OF SCATTERING ANGLE

FILTER 10 AT 1029 AST INSOL ANGLE 44.1 DEG
SPECTRAL BAND 3.95 TO 4.80 MICRONS ELEVATION 23.4 KM

SA	VA	0	10	20	30	40	50	60	70	80	90
0		0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
10		0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
20		0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
30		0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
40		0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
50		0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
60		0.	0.	0.	0.	0.	0.	0.	525.	0.	0.
70		0.	0.	0.	0.	0.	0.	0.	987.	0.	0.
80		0.	0.	0.	0.	0.	180.	60.	645.	0.	0.
90		0.	0.	0.	0.	0.	1018.	330.	585.	0.	0.
100		0.	0.	0.	0.	0.	749.	165.	555.	0.	0.
110		0.	0.	30.	525.	0.	540.	209.	525.	0.	0.
120		0.	0.	15.	629.	0.	540.	105.	480.	0.	0.
130		0.	0.	60.	360.	0.	450.	120.	360.	0.	0.
140		0.	0.	0.	420.	0.	508.	90.	315.	0.	0.
150		0.	0.	0.	465.	0.	180.	103.	240.	0.	0.
160		0.	0.	0.	180.	0.	105.	90.	0.	0.	0.
170		0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
180		0.	0.	0.	0.	0.	0.	0.	0.	0.	0.

RADIANCE VALUES ARE IN MICROWATTS. VA AND SA ARE IN DEGREES.

FIGURE 39

IR MEAN RADIANCE AS A FUNCTION OF SCATTERING ANGLE

FILTER 10 AT 1029 AST INSOL ANGLE 44.1 DEG
SPECTRAL BAND 3.95 TO 4.80 MICRONS ELEVATION 23.4 KM

SA	VA	0	10	20	30	40	50	60	70	80	90
0	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
10	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
20	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
30	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
40	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
50	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
60	0.	0.	0.	0.	0.	0.	0.	0.	13.12	0.	0.
70	0.	0.	0.	0.	0.	0.	0.	0.	12.98	0.	0.
80	0.	0.	0.	0.	0.	0.	15.66	14.27	13.19	0.	0.
90	0.	0.	0.	0.	0.	0.	20.70	13.42	13.11	0.	0.
100	0.	0.	0.	0.	0.	0.	17.05	13.81	13.34	0.	0.
110	0.	0.	24.39	24.13	0.	0.	20.25	12.84	13.76	0.	0.
120	0.	0.	20.12	27.39	0.	0.	18.35	13.42	13.27	0.	0.
130	0.	0.	32.78	33.55	0.	0.	15.74	12.96	13.00	0.	0.
140	0.	0.	0.	25.33	0.	0.	14.48	13.10	13.35	0.	0.
150	0.	0.	0.	17.69	0.	0.	15.01	15.99	13.55	0.	0.
160	0.	0.	0.	23.19	0.	0.	15.77	16.86	0.	0.	0.
170	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
180	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.

RADIANCE VALUES ARE IN MICROWATTS. VA AND SA ARE IN DEGREES.

FIGURE 40

IR RMS FLUCTUATION AS A FUNCTION OF SCATTERING ANGLE

FILTER 10 AT 1029 AST INSOL ANGLE 44.1 DEG
SPECTRAL BAND 3.95 TO 4.80 MICRONS ELEVATION 23.4 KM

VA	0	10	20	30	40	50	60	70	80	90
SA										
0	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
10	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
20	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
30	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
40	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
50	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
60	0.	0.	0.	0.	0.	0.	0.	1.02	0.	0.
70	0.	0.	0.	0.	0.	0.	0.	1.07	0.	0.
80	0.	0.	0.	0.	0.	1.77	1.36	1.05	0.	0.
90	0.	0.	0.	0.	0.	4.81	1.66	1.18	0.	0.
100	0.	0.	0.	0.	0.	5.45	1.68	1.15	0.	0.
110	0.	0.	0.92	1.96	0.	4.83	1.12	1.08	0.	0.
120	0.	0.	1.09	5.36	0.	3.87	1.42	1.12	0.	0.
130	0.	0.	0.36	0.71	0.	1.72	1.20	1.04	0.	0.
140	0.	0.	0.	6.55	0.	1.43	1.21	1.01	0.	0.
150	0.	0.	0.	6.21	0.	2.27	2.21	1.02	0.	0.
160	0.	0.	0.	4.38	0.	2.59	2.14	0.	0.	0.
170	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
180	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.

RADIANCE VALUES ARE IN MICROWATTS. VA AND SA ARE IN DEGREES.

FIGURE 41

IR NUMBER OF OBSERVATIONS AS A FUNCTION OF SUN AZIMUTH

FILTER 9 AT 1035 AST INSOL ANGLE 43.8 DEG
SPECTRAL BAND 4.18 TO 4.97 MICRONS ELEVATION 24.7 KM

VA SA	0	10	20	30	40	50	60	70	80	90
R	0.	0.	0.	0.	0.	75.	0.	90.	0.	0.
0 A	0.	0.	0.	0.	0.	83.	0.	98.	0.	0.
L	0.	0.	0.	0.	0.	90.	0.	105.	0.	0.
R	0.	0.	0.	0.	0.	45.	0.	150.	0.	0.
10 A	0.	0.	0.	0.	0.	113.	0.	173.	0.	0.
L	0.	0.	0.	0.	0.	180.	0.	195.	0.	0.
R	0.	0.	43.	117.	0.	0.	0.	236.	0.	0.
20 A	0.	0.	22.	59.	0.	90.	0.	201.	0.	0.
L	0.	0.	0.	0.	0.	180.	0.	165.	0.	0.
R	0.	0.	0.	180.	0.	0.	0.	195.	0.	0.
30 A	0.	0.	0.	90.	0.	90.	0.	195.	0.	0.
L	0.	0.	0.	0.	0.	180.	0.	195.	0.	0.
R	0.	0.	15.	117.	0.	0.	0.	195.	0.	0.
40 A	0.	0.	8.	59.	0.	90.	0.	180.	0.	0.
L	0.	0.	0.	0.	0.	180.	0.	165.	0.	0.
R	0.	0.	0.	180.	0.	0.	0.	195.	0.	0.
50 A	0.	0.	0.	90.	0.	105.	0.	195.	0.	0.
L	0.	0.	0.	0.	0.	210.	0.	195.	0.	0.
R	0.	0.	0.	180.	0.	0.	0.	225.	0.	0.
60 A	0.	0.	0.	90.	0.	90.	0.	210.	0.	0.
L	0.	0.	0.	0.	0.	180.	0.	195.	0.	0.

RADIANCE VALUES ARE IN MICROWATTS. VA AND SA ARE IN DEGREES.

FIGURE 42

IR NUMBER OF OBSERVATIONS AS A FUNCTION OF SUN AZIMUTH

FILTER 9 AT 1035 AST INSOL ANGLE 43.8 DEG
SPECTRAL BAND 4.18 TO 4.97 MICRONS ELEVATION 24.7 KM

VA	0	10	20	30	40	50	60	70	80	90
SA										
R	0.	0.	0.	150.	0.	0.	0.	193.	0.	0.
70 A	0.	0.	0.	75.	0.	120.	0.	172.	0.	0.
L	0.	0.	0.	0.	0.	240.	0.	150.	0.	0.
R	0.	0.	0.	210.	0.	0.	0.	180.	0.	0.
80 A	0.	0.	0.	105.	0.	98.	0.	165.	0.	0.
L	0.	0.	0.	0.	0.	195.	0.	150.	0.	0.
R	0.	0.	15.	133.	0.	0.	0.	210.	0.	0.
90 A	0.	0.	8.	67.	0.	113.	0.	188.	0.	0.
L	0.	0.	0.	0.	0.	225.	0.	165.	0.	0.
R	0.	0.	15.	165.	0.	0.	0.	195.	0.	0.
100 A	0.	0.	8.	83.	0.	90.	0.	158.	0.	0.
L	0.	0.	0.	0.	0.	180.	0.	120.	0.	0.
R	0.	0.	15.	105.	0.	0.	0.	225.	0.	0.
110 A	0.	0.	8.	53.	0.	113.	0.	210.	0.	0.
L	0.	0.	0.	0.	0.	225.	0.	195.	0.	0.
R	0.	0.	0.	209.	0.	0.	0.	105.	0.	0.
120 A	0.	0.	0.	105.	0.	83.	0.	143.	0.	0.
L	0.	0.	0.	0.	0.	165.	0.	180.	0.	0.

RADIANCE VALUES ARE IN MICROWATTS. VA AND SA ARE IN DEGREES.

FIGURE 42 CONT.

IR NUMBER OF OBSERVATIONS AS A FUNCTION OF SUN AZINUTH

FILTER 9 AT 1035 AST INSOL ANGLE 43.8 DEG
SPECTRAL BAND 4.18 TO 4.97 MICRONS ELEVATION 24.7 KM

	VA	0	10	20	30	40	50	60	70	80	90
SA											
	R	0.	0.	0.	134.	0.	0.	0.	195.	0.	0.
130	A	0.	0.	0.	67.	0.	60.	0.	195.	0.	0.
	L	0.	0.	0.	0.	0.	120.	0.	195.	0.	0.
	R	0.	0.	0.	180.	0.	0.	0.	195.	0.	0.
140	A	0.	0.	0.	90.	0.	0.	0.	120.	0.	0.
	L	0.	0.	0.	0.	0.	0.	0.	45.	0.	0.
	R	0.	0.	0.	180.	0.	0.	0.	210.	0.	0.
150	A	0.	0.	0.	90.	0.	0.	0.	105.	0.	0.
	L	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
	R	0.	0.	0.	45.	0.	0.	0.	45.	0.	0.
160	A	0.	0.	0.	23.	0.	0.	0.	23.	0.	0.
	L	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
	R	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
170	A	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
	L	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
	R	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
180	A	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
	L	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.

RADIANCE VALUES ARE IN MICROWATTS. VA AND SA ARE IN DEGREES.

FIGURE 42 CONT.

IR MEAN RADIANCE AS A FUNCTION OF SUN AZIMUTH

FILTER 9 AT 1035 AST INSOL ANGLE 43.8 DEG
SPECTRAL BAND 4.18 TO 4.97 MICRONS ELEVATION 24.7 KM

VA	0	10	20	30	40	50	60	70	80	90
SA										
R	0.	0.	0.	0.	0.	39.21	0.	31.30	0.	0.
0 A	0.	0.	0.	0.	0.	35.68	0.	30.85	0.	0.
L	0.	0.	0.	0.	0.	32.74	0.	30.47	0.	0.
R	0.	0.	0.	0.	0.	38.19	0.	31.80	0.	0.
10 A	0.	0.	0.	0.	0.	35.62	0.	31.07	0.	0.
L	0.	0.	0.	0.	0.	34.97	0.	30.50	0.	0.
R	0.	0.	37.19	37.36	0.	0.	0.	32.01	0.	0.
20 A	0.	0.	37.19	37.36	0.	30.25	0.	31.27	0.	0.
L	0.	0.	0.	0.	0.	30.25	0.	30.21	0.	0.
R	0.	0.	0.	38.63	0.	0.	0.	32.05	0.	0.
30 A	0.	0.	0.	38.63	0.	32.23	0.	31.86	0.	0.
L	0.	0.	0.	0.	0.	32.23	0.	31.68	0.	0.
R	0.	0.	38.42	38.81	0.	0.	0.	32.64	0.	0.
40 A	0.	0.	38.42	38.81	0.	35.31	0.	32.13	0.	0.
L	0.	0.	0.	0.	0.	35.31	0.	31.52	0.	0.
R	0.	0.	0.	39.23	0.	0.	0.	32.98	0.	0.
50 A	0.	0.	0.	39.23	0.	36.48	0.	32.61	0.	0.
L	0.	0.	0.	0.	0.	36.48	0.	32.24	0.	0.
R	0.	0.	0.	37.01	0.	0.	0.	32.94	0.	0.
60 A	0.	0.	0.	37.01	0.	32.79	0.	32.54	0.	0.
L	0.	0.	0.	0.	0.	32.79	0.	32.08	0.	0.

RADIANCE VALUES ARE IN MICROWATTS. VA AND SA ARE IN DEGREES.

FIGURE 43

IR MEAN RADIANCE AS A FUNCTION OF SUN AZIMUTH

FILTER 9 AT 1035 AST INSOL ANGLE 43.8 DEG
SPECTRAL BAND 4.18 TO 4.97 MICRONS ELEVATION 24.7 KM

VA	0	10	20	30	40	50	60	70	80	90
SA										
R	0.	0.	0.	36.43	0.	0.	0.	32.83	0.	0.
70 A	0.	0.	0.	36.43	0.	30.03	0.	32.34	0.	0.
L	0.	0.	0.	0.	0.	30.03	0.	31.71	0.	0.
R	0.	0.	0.	48.23	0.	0.	0.	32.62	0.	0.
80 A	0.	0.	0.	48.23	0.	31.65	0.	32.34	0.	0.
L	0.	0.	0.	0.	0.	31.65	0.	32.01	0.	0.
R	0.	0.	36.52	43.47	0.	0.	0.	32.82	0.	0.
90 A	0.	0.	36.52	43.47	0.	35.09	0.	32.49	0.	0.
L	0.	0.	0.	0.	0.	35.09	0.	32.06	0.	0.
R	0.	0.	43.10	47.09	0.	0.	0.	32.88	0.	0.
100 A	0.	0.	43.10	47.09	0.	36.71	0.	32.53	0.	0.
L	0.	0.	0.	0.	0.	36.71	0.	31.96	0.	0.
R	0.	0.	35.98	39.86	0.	0.	0.	32.17	0.	0.
110 A	0.	0.	35.98	39.86	0.	36.02	0.	31.99	0.	0.
L	0.	0.	0.	0.	0.	36.02	0.	31.79	0.	0.
R	0.	0.	0.	31.50	0.	0.	0.	31.96	0.	0.
120 A	0.	0.	0.	31.50	0.	32.14	0.	32.34	0.	0.
L	0.	0.	0.	0.	0.	32.14	0.	32.56	0.	0.

RADIANCE VALUES ARE IN MICROWATTS. VA AND SA ARE IN DEGREES.

FIGURE 43 CONT.

IR MEAN RADIANCE AS A FUNCTION OF SUN AZIMUTH

FILTER 9 AT 1035 AST INSOL ANGLE 43.8 DEG
SPECTRAL BAND 4.18 TO 4.97 MICRONS ELEVATION 24.7 KM

	VA	0	10	20	30	40	50	60	70	80	90
SA											
	R	0.	0.	0.	34.34	0.	0.	0.	31.97	0.	0.
130	A	0.	0.	0.	34.34	0.	30.14	0.	32.07	0.	0.
	L	0.	0.	0.	0.	0.	30.14	0.	32.18	0.	0.
	R	0.	0.	0.	43.29	0.	0.	0.	32.33	0.	0.
140	A	0.	0.	0.	43.29	0.	0.	0.	32.30	0.	0.
	L	0.	0.	0.	0.	0.	0.	0.	32.14	0.	0.
	R	0.	0.	0.	35.15	0.	0.	0.	32.35	0.	0.
150	A	0.	0.	0.	35.15	0.	0.	0.	32.35	0.	0.
	L	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
	R	0.	0.	0.	32.43	0.	0.	0.	32.26	0.	0.
160	A	0.	0.	0.	32.43	0.	0.	0.	32.26	0.	0.
	L	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
	R	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
170	A	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
	L	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
	R	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
180	A	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
	L	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.

RADIANCE VALUES ARE IN MICROWATTS. VA AND SA ARE IN DEGREES.

FIGURE 43 CONT.

IR RMS FLUCTUATION AS A FUNCTION OF SUN AZIMUTH

FILTER 9 AT 1035 AST INSOL ANGLE 43.8 DEG
SPECTRAL BAND 4.18 TO 4.97 MICRONS ELEVATION 24.7 KM

VA	0	10	20	30	40	50	60	70	80	90
SA										
R	0.	0.	0.	0.	0.	1.00	0.	1.04	0.	0.
0 A	0.	0.	0.	0.	0.	3.01	0.	1.46	0.	0.
L	0.	0.	0.	0.	0.	2.84	0.	1.03	0.	0.
R	0.	0.	0.	0.	0.	0.91	0.	0.99	0.	0.
10 A	0.	0.	0.	0.	0.	2.37	0.	1.49	0.	0.
L	0.	0.	0.	0.	0.	2.19	0.	1.11	0.	0.
R	0.	0.	1.24	1.16	0.	0.	0.	0.95	0.	0.
20 A	0.	0.	1.24	1.16	0.	1.35	0.	1.41	0.	0.
L	0.	0.	0.	0.	0.	1.35	0.	1.04	0.	0.
R	0.	0.	0.	1.22	0.	0.	0.	0.94	0.	0.
30 A	0.	0.	0.	1.22	0.	1.64	0.	1.60	0.	0.
L	0.	0.	0.	0.	0.	1.64	0.	1.30	0.	0.
R	0.	0.	1.13	1.12	0.	0.	0.	0.96	0.	0.
40 A	0.	0.	1.13	1.12	0.	1.32	0.	1.38	0.	0.
L	0.	0.	0.	0.	0.	1.32	0.	1.00	0.	0.
R	0.	0.	0.	1.06	0.	0.	0.	0.92	0.	0.
50 A	0.	0.	0.	1.06	0.	1.11	0.	1.33	0.	0.
L	0.	0.	0.	0.	0.	1.11	0.	0.96	0.	0.
R	0.	0.	0.	1.24	0.	0.	0.	0.93	0.	0.
60 A	0.	0.	0.	1.24	0.	1.45	0.	1.31	0.	0.
L	0.	0.	0.	0.	0.	1.45	0.	0.93	0.	0.

RADIANCE VALUES ARE IN MICROWATTS. VA AND SA ARE IN DEGREES.

FIGURE 44

IR RMS FLUCTUATION AS A FUNCTION OF SUN AZIMUTH

FILTER 9 AT 1035 AST INSOL ANGLE 43.8 DEG
SPECTRAL BAND 4.18 TO 4.97 MICRONS ELEVATION 24.7 KM

VA	0	10	20	30	40	50	60	70	80	90
SA										
R	0.	0.	0.	2.21	0.	0.	0.	0.92	0.	0.
70 A	0.	0.	0.	2.21	0.	0.94	0.	1.40	0.	0.
L	0.	0.	0.	0.	0.	0.94	0.	1.06	0.	0.
R	0.	0.	0.	2.10	0.	0.	0.	0.97	0.	0.
80 A	0.	0.	0.	2.10	0.	1.41	0.	1.35	0.	0.
L	0.	0.	0.	0.	0.	1.41	0.	0.94	0.	0.
R	0.	0.	0.87	4.95	0.	0.	0.	0.94	0.	0.
90 A	0.	0.	0.87	4.95	0.	1.12	0.	1.33	0.	0.
L	0.	0.	0.	0.	0.	1.12	0.	0.94	0.	0.
R	0.	0.	1.39	2.96	0.	0.	0.	0.91	0.	0.
100 A	0.	0.	1.39	2.96	0.	0.92	0.	1.28	0.	0.
L	0.	0.	0.	0.	0.	0.92	0.	0.91	0.	0.
R	0.	0.	0.86	2.40	0.	0.	0.	0.96	0.	0.
110 A	0.	0.	0.86	2.40	0.	1.05	0.	1.38	0.	0.
L	0.	0.	0.	0.	0.	1.05	0.	0.99	0.	0.
R	0.	0.	0.	1.44	0.	0.	0.	1.03	0.	0.
120 A	0.	0.	0.	1.44	0.	1.71	0.	1.42	0.	0.
L	0.	0.	0.	0.	0.	1.71	0.	0.97	0.	0.

RADIANCE VALUES ARE IN MICROWATTS. VA AND SA ARE IN DEGREES.

FIGURE 44 CONT.

IR RMS FLUCTUATION AS A FUNCTION OF SUN AZIMUTH

FILTER 9 AT 1035 AST INSOL ANGLE 43.8 DEG
SPECTRAL BAND 4.18 TO 4.97 MICRONS ELEVATION 24.7 KM

VA	0	10	20	30	40	50	60	70	80	90
SA										
R	0.	0.	0.	2.79	0.	0.	0.	0.95	0.	0.
130 A	0.	0.	0.	2.79	0.	1.03	0.	1.34	0.	0.
L	0.	0.	0.	0.	0.	1.03	0.	0.95	0.	0.
R	0.	0.	0.	2.86	0.	0.	0.	0.97	0.	0.
140 A	0.	0.	0.	2.86	0.	0.	0.	1.34	0.	0.
L	0.	0.	0.	0.	0.	0.	0.	0.93	0.	0.
R	0.	0.	0.	5.61	0.	0.	0.	0.92	0.	0.
150 A	0.	0.	0.	5.61	0.	0.	0.	0.92	0.	0.
L	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
R	0.	0.	0.	1.89	0.	0.	0.	0.95	0.	0.
160 A	0.	0.	0.	1.89	0.	0.	0.	0.95	0.	0.
L	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
R	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
170 A	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
L	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
R	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
180 A	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
L	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.

RADIANCE VALUES ARE IN MICROWATTS. VA AND SA ARE IN DEGREES.

FIGURE 44 CONT.

IR NUMBER OF OBSERVATIONS AS A FUNCTION OF SCATTERING ANGLE

FILTER 9 AT 1035 AST INSOL ANGLE 43.8 DEG
SPECTRAL BAND 4.18 TO 4.97 MICRONS ELEVATION 24.7 KM

SA	VA	0	10	20	30	40	50	60	70	80	90
0		0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
10		0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
20		0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
30		0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
40		0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
50		0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
60		0.	0.	0.	0.	0.	0.	0.	525.	0.	0.
70		0.	0.	0.	0.	0.	0.	0.	1016.	0.	0.
80		0.	0.	0.	0.	0.	0.	0.	780.	0.	0.
90		0.	0.	0.	0.	0.	825.	0.	583.	0.	0.
100		0.	0.	0.	0.	0.	495.	0.	555.	0.	0.
110		0.	0.	43.	354.	0.	405.	0.	525.	0.	0.
120		0.	0.	15.	600.	0.	360.	0.	495.	0.	0.
130		0.	0.	15.	418.	0.	315.	0.	525.	0.	0.
140		0.	0.	30.	329.	0.	255.	0.	360.	0.	0.
150		0.	0.	0.	419.	0.	15.	0.	90.	0.	0.
160		0.	0.	0.	165.	0.	0.	0.	0.	0.	0.
170		0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
180		0.	0.	0.	0.	0.	0.	0.	0.	0.	0.

RADIANCE VALUES ARE IN MICROWATTS. VA AND SA ARE IN DEGREES.

FIGURE 45

IR MEAN RADIANCE AS A FUNCTION OF SCATTERING ANGLE

FILTER 9 AT 1035 AST INSOL ANGLE 43.8 DEG
SPECTRAL BAND 4.18 TO 4.97 MICRONS ELEVATION 24.7 KM

VA	0	10	20	30	40	50	60	70	80	90
SA										
0	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
10	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
20	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
30	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
40	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
50	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
60	0.	0.	0.	0.	0.	0.	0.	30.90	0.	0.
70	0.	0.	0.	0.	0.	0.	0.	31.63	0.	0.
80	0.	0.	0.	0.	0.	0.	0.	32.61	0.	0.
90	0.	0.	0.	0.	0.	33.60	0.	32.40	0.	0.
100	0.	0.	0.	0.	0.	35.04	0.	32.37	0.	0.
110	0.	0.	37.19	38.15	0.	30.56	0.	32.43	0.	0.
120	0.	0.	38.42	38.12	0.	35.42	0.	32.21	0.	0.
130	0.	0.	36.52	46.73	0.	36.12	0.	32.07	0.	0.
140	0.	0.	39.54	37.09	0.	31.18	0.	32.36	0.	0.
150	0.	0.	0.	38.94	0.	29.94	0.	32.20	0.	0.
160	0.	0.	0.	31.83	0.	0.	0.	0.	0.	0.
170	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
180	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.

RADIANCE VALUES ARE IN MICROWATTS. VA AND SA ARE IN DEGREES.

FIGURE 46

IR RMS FLUCTUATION AS A FUNCTION OF SCATTERING ANGLE

FILTER 9 AT 1035 AST INSOL ANGLE 43.8 DEG
SPECTRAL BAND 4.18 TO 4.97 MICRONS ELEVATION 24.7 KM

VA	0	10	20	30	40	50	60	70	80	90
SA										
0	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
10	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
20	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
30	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
40	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
50	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
60	0.	0.	0.	0.	0.	0.	0.	1.19	0.	0.
70	0.	0.	0.	0.	0.	0.	0.	1.22	0.	0.
80	0.	0.	0.	0.	0.	0.	0.	1.01	0.	0.
90	0.	0.	0.	0.	0.	3.25	0.	1.09	0.	0.
100	0.	0.	0.	0.	0.	2.11	0.	1.00	0.	0.
110	0.	0.	1.24	1.29	0.	1.25	0.	1.06	0.	0.
120	0.	0.	1.13	2.36	0.	1.43	0.	1.03	0.	0.
130	0.	0.	0.87	4.12	0.	1.10	0.	0.95	0.	0.
140	0.	0.	3.74	6.20	0.	1.60	0.	0.95	0.	0.
150	0.	0.	0.	5.55	0.	1.21	0.	0.92	0.	0.
160	0.	0.	0.	2.30	0.	0.	0.	0.	0.	0.
170	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
180	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.

RADIANCE VALUES ARE IN MICROWATTS. VA AND SA ARE IN DEGREES.

FIGURE 47

IR NUMBER OF OBSERVATIONS AS A FUNCTION OF SUN AZIMUTH

FILTER 8 AT 1039 AST INSOL ANGLE 43.6 DEG
SPECTRAL BAND 3.42 TO 4.81 MICRONS ELEVATION 25.5 KM

VA	0	10	20	30	40	50	60	70	80	90
SA										
R	0.	0.	0.	90.	0.	0.	75.	105.	0.	0.
0 A	0.	0.	0.	90.	0.	0.	98.	105.	0.	0.
L	0.	0.	0.	90.	0.	0.	120.	105.	0.	0.
R	0.	0.	0.	0.	30.	0.	45.	135.	0.	0.
10 A	0.	0.	0.	98.	15.	0.	120.	165.	0.	0.
L	0.	0.	0.	195.	0.	0.	195.	195.	0.	0.
R	0.	0.	0.	0.	149.	0.	0.	165.	0.	0.
20 A	0.	0.	0.	105.	75.	0.	105.	143.	0.	0.
L	0.	0.	0.	210.	0.	0.	210.	120.	0.	0.
R	0.	0.	0.	0.	120.	0.	0.	150.	0.	0.
30 A	0.	0.	0.	105.	60.	0.	98.	172.	0.	0.
L	0.	0.	0.	209.	0.	0.	195.	194.	0.	0.
R	0.	0.	0.	0.	120.	0.	0.	195.	0.	0.
40 A	0.	0.	0.	105.	60.	0.	98.	203.	0.	0.
L	0.	0.	0.	209.	0.	0.	195.	210.	0.	0.
R	0.	0.	0.	0.	178.	0.	0.	180.	0.	0.
50 A	0.	0.	0.	98.	89.	0.	98.	173.	0.	0.
L	0.	0.	0.	195.	0.	0.	195.	165.	0.	0.
R	0.	0.	0.	0.	180.	0.	0.	120.	0.	0.
60 A	0.	0.	0.	68.	90.	0.	105.	143.	0.	0.
L	0.	0.	0.	135.	0.	0.	210.	165.	0.	0.

RADIANCE VALUES ARE IN MICROWATTS. VA AND SA ARE IN DEGREES.

FIGURE 48

IR NUMBER OF OBSERVATIONS AS A FUNCTION OF SUN AZIMUTH

FILTER 8 AT 1039 AST INSOL ANGLE 43.6 DEG
SPECTRAL BAND 3.42 TO 4.81 MICRONS ELEVATION 25.5 KM

VA	0	10	20	30	40	50	60	70	80	90
SA										
R	0.	0.	0.	0.	225.	0.	0.	135.	0.	0.
70 A	0.	0.	0.	98.	113.	0.	83.	165.	0.	0.
L	0.	0.	0.	195.	0.	0.	165.	195.	0.	0.
R	0.	0.	0.	0.	195.	0.	0.	209.	0.	0.
80 A	0.	0.	0.	83.	98.	0.	98.	195.	0.	0.
L	0.	0.	0.	165.	0.	0.	195.	180.	0.	0.
R	0.	0.	0.	0.	209.	0.	0.	210.	0.	0.
90 A	0.	0.	0.	113.	105.	0.	90.	203.	0.	0.
L	0.	0.	0.	225.	0.	0.	180.	195.	0.	0.
R	0.	0.	0.	0.	180.	0.	0.	150.	0.	0.
100 A	0.	0.	0.	90.	90.	0.	98.	165.	0.	0.
L	0.	0.	0.	180.	0.	0.	195.	180.	0.	0.
R	0.	0.	0.	0.	150.	0.	0.	210.	0.	0.
110 A	0.	0.	0.	98.	75.	0.	98.	203.	0.	0.
L	0.	0.	0.	195.	0.	0.	195.	195.	0.	0.
R	0.	0.	0.	0.	135.	0.	0.	225.	0.	0.
120 A	0.	0.	0.	68.	68.	0.	98.	210.	0.	0.
L	0.	0.	0.	135.	0.	0.	195.	194.	0.	0.

RADIANCE VALUES ARE IN MICROWATTS. VA AND SA ARE IN DEGREES.

FIGURE 48 CONT.

IR NUMBER OF OBSERVATIONS AS A FUNCTION OF SUN AZIMUTH

FILTER 8 AT 1039 AST INSOL ANGLE 43.6 DEG
SPECTRAL BAND 3.42 TO 4.81 MICRONS ELEVATION 25.5 KM

VA SA	0	10	20	30	40	50	60	70	80	90
R	0.	0.	0.	0.	195.	0.	0.	210.	0.	0.
130 A	0.	0.	0.	90.	98.	0.	90.	195.	0.	0.
L	0.	0.	0.	180.	0.	0.	180.	180.	0.	0.
R	0.	0.	0.	0.	195.	0.	0.	210.	0.	0.
140 A	0.	0.	0.	38.	98.	0.	0.	158.	0.	0.
L	0.	0.	0.	75.	0.	0.	0.	105.	0.	0.
R	0.	0.	0.	0.	194.	0.	0.	209.	0.	0.
150 A	0.	0.	0.	0.	97.	0.	0.	105.	0.	0.
L	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
R	0.	0.	0.	0.	0.	0.	0.	15.	0.	0.
160 A	0.	0.	0.	0.	0.	0.	0.	8.	0.	0.
L	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
R	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
170 A	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
L	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
R	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
180 A	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
L	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.

RADIANCE VALUES ARE IN MICROWATTS. VA AND SA ARE IN DEGREES.

FIGURE 48 CONT.

IR MEAN RADIANCE AS A FUNCTION OF SUN AZIMUTH

FILTER 8 AT 1039 AST INSOL ANGLE 43.6 DEG
SPECTRAL BAND 3.42 TO 4.81 MICRONS ELEVATION 25.5 KM

VA	0	10	20	30	40	50	60	70	80	90
SA										
R	0.	0.	0.	43.52	0.	0.	31.73	22.55	0.	0.
A	0.	0.	0.	44.50	0.	0.	32.35	22.46	0.	0.
L	0.	0.	0.	45.48	0.	0.	32.74	22.38	0.	0.
R	0.	0.	0.	0.	39.76	0.	25.50	20.97	0.	0.
10 A	0.	0.	0.	45.78	39.76	0.	25.94	22.43	0.	0.
L	0.	0.	0.	45.78	0.	0.	26.05	23.44	0.	0.
R	0.	0.	0.	0.	40.30	0.	0.	18.09	0.	0.
20 A	0.	0.	0.	43.98	40.30	0.	28.96	20.30	0.	0.
L	0.	0.	0.	43.98	0.	0.	28.96	23.34	0.	0.
R	0.	0.	0.	0.	40.18	0.	0.	17.37	0.	0.
30 A	0.	0.	0.	44.02	40.18	0.	32.64	18.53	0.	0.
L	0.	0.	0.	44.02	0.	0.	32.64	19.42	0.	0.
R	0.	0.	0.	0.	38.93	0.	0.	16.81	0.	0.
40 A	0.	0.	0.	39.27	38.93	0.	36.14	17.93	0.	0.
L	0.	0.	0.	39.27	0.	0.	36.14	18.98	0.	0.
R	0.	0.	0.	0.	37.82	0.	0.	16.76	0.	0.
50 A	0.	0.	0.	43.73	37.82	0.	34.49	20.26	0.	0.
L	0.	0.	0.	43.73	0.	0.	34.49	24.07	0.	0.
R	0.	0.	0.	0.	38.26	0.	0.	16.82	0.	0.
60 A	0.	0.	0.	41.96	38.26	0.	34.84	22.58	0.	0.
L	0.	0.	0.	41.96	0.	0.	34.84	26.77	0.	0.

RADIANCE VALUES ARE IN MICROWATTS. VA AND SA ARE IN DEGREES.

FIGURE 49

IR MEAN RADIANCE AS A FUNCTION OF SUN AZIMUTH

FILTER 8 AT 1039 AST INSOL ANGLE 43.6 DEG
SPECTRAL BAND 3.42 TO 4.81 MICRONS ELEVATION 25.5 KM

VA	0	10	20	30	40	50	60	70	80	90
SA										
R	0.	0.	0.	0.	31.87	0.	0.	16.73	0.	0.
70 A	0.	0.	0.	43.64	31.87	0.	28.35	26.35	0.	0.
L	0.	0.	0.	43.64	0.	0.	28.35	33.02	0.	0.
R	0.	0.	0.	0.	34.91	0.	0.	17.43	0.	0.
80 A	0.	0.	0.	36.84	34.91	0.	24.86	23.97	0.	0.
L	0.	0.	0.	36.84	0.	0.	24.86	31.56	0.	0.
R	0.	0.	0.	0.	39.47	0.	0.	17.48	0.	0.
90 A	0.	0.	0.	37.59	39.47	0.	27.96	21.35	0.	0.
L	0.	0.	0.	37.59	0.	0.	27.96	25.52	0.	0.
R	0.	0.	0.	0.	43.54	0.	0.	16.99	0.	0.
100 A	0.	0.	0.	39.60	43.54	0.	20.71	24.50	0.	0.
L	0.	0.	0.	39.60	0.	0.	20.71	30.77	0.	0.
R	0.	0.	0.	0.	42.45	0.	0.	16.86	0.	0.
110 A	0.	0.	0.	38.43	42.45	0.	21.41	21.59	0.	0.
L	0.	0.	0.	38.43	0.	0.	21.41	26.68	0.	0.
R	0.	0.	0.	0.	40.22	0.	0.	17.92	0.	0.
120 A	0.	0.	0.	38.24	40.22	0.	21.71	21.03	0.	0.
L	0.	0.	0.	38.24	0.	0.	21.71	24.64	0.	0.

RADIANCE VALUES ARE IN MICROWATTS. VA AND SA ARE IN DEGREES.

FIGURE 49 CONT.

IR MEAN RADIANCE AS A FUNCTION OF SUN AZIMUTH

FILTER 8 AT 1039 AST INSOL ANGLE 43.6 DEG
SPECTRAL BAND 3.42 TO 4.81 MICRONS ELEVATION 25.5 KM

	VA	0	10	20	30	40	50	60	70	80	90
SA											
	R	0.	0.	0.	0.	41.82	0.	0.	20.22	0.	0.
130	A	0.	0.	0.	37.32	41.82	0.	18.77	20.28	0.	0.
	L	0.	0.	0.	37.32	0.	0.	18.77	20.36	0.	0.
	R	0.	0.	0.	0.	40.04	0.	0.	23.63	0.	0.
140	A	0.	0.	0.	37.88	40.04	0.	0.	22.21	0.	0.
	L	0.	0.	0.	37.88	0.	0.	0.	19.38	0.	0.
	R	0.	0.	0.	0.	41.08	0.	0.	25.35	0.	0.
150	A	0.	0.	0.	0.	41.08	0.	0.	25.35	0.	0.
	L	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
	R	0.	0.	0.	0.	0.	0.	0.	24.78	0.	0.
160	A	0.	0.	0.	0.	0.	0.	0.	24.78	0.	0.
	L	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
	R	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
170	A	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
	L	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
	R	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
180	A	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
	L	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.

RADIANCE VALUES ARE IN MICROWATTS. VA AND SA ARE IN DEGREES.

FIGURE 49 CONT.

IR RMS FLUCTUATION AS A FUNCTION OF SUN AZIMUTH

FILTER 8 AT 1039 AST INSOL ANGLE 43.6 DEG
SPECTRAL BAND 3.42 TO 4.81 MICRONS ELEVATION 25.5 KM

VA SA	0	10	20	30	40	50	60	70	80	90
R	0.	0.	0.	0.62	0.	0.	3.72	1.73	0.	0.
0 A	0.	0.	0.	0.72	0.	0.	5.25	2.13	0.	0.
L	0.	0.	0.	0.37	0.	0.	3.70	1.23	0.	0.
R	0.	0.	0.	0.	0.23	0.	3.05	2.53	0.	0.
10 A	0.	0.	0.	1.44	0.23	0.	8.30	2.84	0.	0.
L	0.	0.	0.	1.44	0.	0.	7.72	1.29	0.	0.
R	0.	0.	0.	0.	0.34	0.	0.	1.20	0.	0.
20 A	0.	0.	0.	1.19	0.34	0.	7.14	1.74	0.	0.
L	0.	0.	0.	1.19	0.	0.	7.14	1.27	0.	0.
R	0.	0.	0.	0.	0.35	0.	0.	1.04	0.	0.
30 A	0.	0.	0.	1.18	0.35	0.	4.84	2.58	0.	0.
L	0.	0.	0.	1.18	0.	0.	4.84	2.36	0.	0.
R	0.	0.	0.	0.	2.06	0.	0.	1.02	0.	0.
40 A	0.	0.	0.	2.61	2.06	0.	1.86	2.47	0.	0.
L	0.	0.	0.	2.61	0.	0.	1.86	2.25	0.	0.
R	0.	0.	0.	0.	1.73	0.	0.	0.97	0.	0.
50 A	0.	0.	0.	0.80	1.73	0.	2.01	3.91	0.	0.
L	0.	0.	0.	0.80	0.	0.	2.01	3.78	0.	0.
R	0.	0.	0.	0.	1.11	0.	0.	1.02	0.	0.
60 A	0.	0.	0.	0.91	1.11	0.	1.18	4.83	0.	0.
L	0.	0.	0.	0.91	0.	0.	1.18	4.73	0.	0.

RADIANCE VALUES ARE IN MICROWATTS. VA AND SA ARE IN DEGREES.

FIGURE 50

IR RMS FLUCTUATION AS A FUNCTION OF SUN AZIMUTH

FILTER 8 AT 1039 AST INSOL ANGLE 43.6 DEG
SPECTRAL BAND 3.42 TO 4.81 MICRONS ELEVATION 25.5 KM

VA	0	10	20	30	40	50	60	70	80	90
SA										
R	0.	0.	0.	0.	6.30	0.	0.	1.00	0.	0.
70 A	0.	0.	0.	1.12	6.30	0.	7.13	4.91	0.	0.
L	0.	0.	0.	1.12	0.	0.	7.13	4.80	0.	0.
R	0.	0.	0.	0.	5.87	0.	0.	1.17	0.	0.
80 A	0.	0.	0.	2.85	5.87	0.	4.64	4.94	0.	0.
L	0.	0.	0.	2.85	0.	0.	4.64	4.80	0.	0.
R	0.	0.	0.	0.	1.80	0.	0.	1.29	0.	0.
90 A	0.	0.	0.	3.71	1.80	0.	1.84	6.39	0.	0.
L	0.	0.	0.	3.71	0.	0.	1.84	6.25	0.	0.
R	0.	0.	0.	0.	1.91	0.	0.	1.12	0.	0.
100 A	0.	0.	0.	1.06	1.91	0.	1.99	5.62	0.	0.
L	0.	0.	0.	1.06	0.	0.	1.99	5.51	0.	0.
R	0.	0.	0.	0.	2.14	0.	0.	0.99	0.	0.
110 A	0.	0.	0.	2.32	2.14	0.	1.95	4.74	0.	0.
L	0.	0.	0.	2.32	0.	0.	1.95	4.64	0.	0.
R	0.	0.	0.	0.	3.24	0.	0.	1.39	0.	0.
120 A	0.	0.	0.	1.45	3.24	0.	2.29	3.65	0.	0.
L	0.	0.	0.	1.45	0.	0.	2.29	3.38	0.	0.

RADIANCE VALUES ARE IN MICROWATTS. VA AND SA ARE IN DEGREES.

FIGURE 50 CONT.

IR RMS FLUCTUATION AS A FUNCTION OF SUN AZIMUTH

FILTER 8 AT 1039 AST INSOL ANGLE 43.6 DEG
SPECTRAL BAND 3.42 TO 4.81 MICRONS ELEVATION 25.5 KM

	VA	0	10	20	30	40	50	60	70	80	90
SA											
	R	0.	0.	0.	0.	1.24	0.	0.	1.35	0.	0.
130	A	0.	0.	0.	0.48	1.24	0.	1.86	2.56	0.	0.
	L	0.	0.	0.	0.48	0.	0.	1.86	2.17	0.	0.
	R	0.	0.	0.	0.	2.77	0.	0.	2.13	0.	0.
140	A	0.	0.	0.	1.92	2.77	0.	0.	2.57	0.	0.
	L	0.	0.	0.	1.92	0.	0.	0.	1.44	0.	0.
	R	0.	0.	0.	0.	1.47	0.	0.	1.93	0.	0.
150	A	0.	0.	0.	0.	1.47	0.	0.	1.93	0.	0.
	L	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
	R	0.	0.	0.	0.	0.	0.	0.	2.01	0.	0.
160	A	0.	0.	0.	0.	0.	0.	0.	2.01	0.	0.
	L	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
	R	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
170	A	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
	L	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
	R	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
180	A	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
	L	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.

RADIANCE VALUES ARE IN MICROWATTS. VA AND SA ARE IN DEGREES.

FIGURE 50 CONT.

IR NUMBER OF OBSERVATIONS AS A FUNCTION OF SCATTERING ANGLE

FILTER 8 AT 1039 AST INSOL ANGLE 43.6 DEG
SPECTRAL BAND 3.42 TO 4.81 MICRONS ELEVATION 25.5 KM

VA	0	10	20	30	40	50	60	70	80	90
SA										
0	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
10	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
20	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
30	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
40	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
50	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
60	0.	0.	0.	0.	0.	0.	0.	405.	0.	0.
70	0.	0.	0.	0.	0.	0.	0.	1019.	0.	0.
80	0.	0.	0.	0.	0.	0.	930.	690.	0.	0.
90	0.	0.	0.	0.	105.	0.	480.	525.	0.	0.
100	0.	0.	0.	0.	492.	0.	300.	599.	0.	0.
110	0.	0.	0.	1168.	435.	0.	285.	540.	0.	0.
120	0.	0.	0.	465.	374.	0.	285.	539.	0.	0.
130	0.	0.	0.	450.	300.	0.	300.	615.	0.	0.
140	0.	0.	0.	345.	225.	0.	165.	405.	0.	0.
150	0.	0.	0.	255.	285.	0.	0.	74.	0.	0.
160	0.	0.	0.	0.	239.	0.	0.	0.	0.	0.
170	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
180	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.

RADIANCE VALUES ARE IN MICROWATTS. VA AND SA ARE IN DEGREES.

FIGURE 51

IR MEAN RADIANCE AS A FUNCTION OF SCATTERING ANGLE

FILTER 8 AT 1039 AST INSOL ANGLE 43.6 DEG
SPECTRAL BAND 3.42 TO 4.81 MICRONS ELEVATION 25.5 KM

VA	0	10	20	30	40	50	60	70	80	90
SA										
0	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
10	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
20	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
30	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
40	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
50	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
60	0.	0.	0.	0.	0.	0.	0.	22.85	0.	0.
70	0.	0.	0.	0.	0.	0.	0.	19.40	0.	0.
80	0.	0.	0.	0.	0.	0.	30.46	20.20	0.	0.
90	0.	0.	0.	0.	40.10	0.	34.77	25.34	0.	0.
100	0.	0.	0.	0.	39.05	0.	26.79	23.13	0.	0.
110	0.	0.	0.	43.51	34.01	0.	27.72	22.60	0.	0.
120	0.	0.	0.	41.67	38.29	0.	20.55	21.73	0.	0.
130	0.	0.	0.	38.16	43.13	0.	22.00	20.07	0.	0.
140	0.	0.	0.	38.35	40.72	0.	18.48	23.77	0.	0.
150	0.	0.	0.	37.49	41.38	0.	0.	24.95	0.	0.
160	0.	0.	0.	0.	40.47	0.	0.	0.	0.	0.
170	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
180	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.

RADIANCE VALUES ARE IN MICROWATTS. VA AND SA ARE IN DEGREES.

FIGURE 52

IR RMS FLUCTUATION AS A FUNCTION OF SCATTERING ANGLE

FILTER 8 AT 1039 AST INSOL ANGLE 43.6 DEG
SPECTRAL BAND 3.42 TO 4.81 MICRONS ELEVATION 25.5 KM

VA	0	10	20	30	40	50	60	70	80	90
SA										
0	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
10	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
20	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
30	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
40	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
50	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
60	0.	0.	0.	0.	0.	0.	0.	1.44	0.	0.
70	0.	0.	0.	0.	0.	0.	0.	2.68	0.	0.
80	0.	0.	0.	0.	0.	0.	6.66	4.95	0.	0.
90	0.	0.	0.	0.	0.35	0.	1.76	8.20	0.	0.
100	0.	0.	0.	0.	1.82	0.	6.94	7.26	0.	0.
110	0.	0.	0.	2.58	6.11	0.	2.95	7.16	0.	0.
120	0.	0.	0.	2.93	3.33	0.	1.91	5.85	0.	0.
130	0.	0.	0.	3.14	2.17	0.	2.08	1.79	0.	0.
140	0.	0.	0.	1.99	2.75	0.	1.65	2.77	0.	0.
150	0.	0.	0.	1.14	2.24	0.	0.	1.69	0.	0.
160	0.	0.	0.	0.	1.84	0.	0.	0.	0.	0.
170	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
180	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.

RADIANCE VALUES ARE IN MICROWATTS. VA AND SA ARE IN DEGREES.

FIGURE 53

IR NUMBER OF OBSERVATIONS AS A FUNCTION OF SUN AZIMUTH

FILTER 7 AT 1045 AST INSOL ANGLE 43.4 DEG
SPECTRAL BAND 2.54 TO 2.89 MICRONS ELEVATION 26.8 KM

VA	0	10	20	30	40	50	60	70	80	90
SA										
R	0.	0.	0.	0.	0.	0.	0.	60.	0.	0.
0 A	0.	0.	0.	0.	0.	0.	0.	75.	0.	0.
L	0.	0.	0.	0.	0.	0.	0.	90.	0.	0.
R	0.	0.	0.	0.	30.	0.	0.	164.	0.	0.
10 A	0.	0.	0.	35.	15.	0.	0.	187.	0.	0.
L	0.	0.	0.	69.	0.	0.	0.	210.	0.	0.
R	0.	0.	0.	0.	120.	0.	0.	89.	0.	0.
20 A	0.	0.	0.	97.	60.	0.	0.	119.	0.	0.
L	0.	0.	0.	194.	0.	0.	0.	142.	0.	0.
R	0.	0.	0.	0.	193.	0.	0.	165.	0.	0.
30 A	0.	0.	0.	96.	97.	0.	0.	188.	0.	0.
L	0.	0.	0.	192.	0.	0.	0.	210.	0.	0.
R	0.	0.	0.	0.	60.	0.	0.	165.	0.	0.
40 A	0.	0.	0.	98.	30.	0.	0.	173.	0.	0.
L	0.	0.	0.	195.	0.	0.	0.	180.	0.	0.
R	0.	0.	0.	0.	45.	0.	0.	148.	0.	0.
50 A	0.	0.	0.	87.	23.	0.	0.	172.	0.	0.
L	0.	0.	0.	174.	0.	0.	0.	195.	0.	0.
R	0.	0.	0.	0.	105.	0.	0.	104.	0.	0.
60 A	0.	0.	0.	58.	53.	0.	0.	157.	0.	0.
L	0.	0.	0.	115.	0.	0.	0.	209.	0.	0.

RADIANCE VALUES ARE IN MICROWATTS. VA AND SA ARE IN DEGREES.

FIGURE 54

IR NUMBER OF OBSERVATIONS AS A FUNCTION OF SUN AZIMUTH

FILTER 7 AT 1045 AST INSOL ANGLE 43.4 DEG
SPECTRAL BAND 2.54 TO 2.89 MICRONS ELEVATION 26.8 KM

VA	0	10	20	30	40	50	60	70	80	90
SA										
R	0.	0.	0.	0.	145.	0.	0.	150.	0.	0.
70 A	0.	0.	0.	81.	73.	0.	0.	165.	0.	0.
L	0.	0.	0.	162.	0.	0.	0.	180.	0.	0.
R	0.	0.	0.	0.	135.	0.	0.	192.	0.	0.
80 A	0.	0.	0.	105.	68.	0.	0.	201.	0.	0.
L	0.	0.	0.	209.	0.	0.	0.	210.	0.	0.
R	0.	0.	0.	0.	113.	0.	0.	87.	0.	0.
90 A	0.	0.	0.	89.	57.	0.	0.	149.	0.	0.
L	0.	0.	0.	178.	0.	0.	0.	210.	0.	0.
R	0.	0.	0.	0.	195.	0.	0.	194.	0.	0.
100 A	0.	0.	0.	105.	98.	0.	0.	195.	0.	0.
L	0.	0.	0.	209.	0.	0.	0.	195.	0.	0.
R	0.	0.	0.	0.	105.	0.	0.	195.	0.	0.
110 A	0.	0.	0.	89.	53.	0.	0.	216.	0.	0.
L	0.	0.	0.	178.	0.	0.	0.	237.	0.	0.
R	0.	0.	0.	0.	163.	0.	0.	164.	0.	0.
120 A	0.	0.	0.	98.	82.	0.	0.	172.	0.	0.
L	0.	0.	0.	195.	0.	0.	0.	179.	0.	0.

RADIANCE VALUES ARE IN MICROWATTS. VA AND SA ARE IN DEGREES.

FIGURE 54 CONT.

IR NUMBER OF OBSERVATIONS AS A FUNCTION OF SUN AZIMUTH

FILTER 7 AT 1045 AST INSOL ANGLE 43.4 DEG
SPECTRAL BAND 2.54 TO 2.89 MICRONS ELEVATION 26.8 KM

VA SA	0	10	20	30	40	50	60	70	80	90
R	0.	0.	0.	0.	207.	0.	0.	119.	0.	0.
130 A	0.	0.	0.	77.	104.	0.	0.	172.	0.	0.
L	0.	0.	0.	154.	0.	0.	0.	225.	0.	0.
R	0.	0.	0.	0.	150.	0.	0.	60.	0.	0.
140 A	0.	0.	0.	30.	75.	0.	0.	60.	0.	0.
L	0.	0.	0.	60.	0.	0.	0.	60.	0.	0.
R	0.	0.	0.	0.	177.	0.	0.	42.	0.	0.
150 A	0.	0.	0.	0.	89.	0.	0.	21.	0.	0.
L	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
R	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
160 A	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
L	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
R	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
170 A	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
L	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
R	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
180 A	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
L	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.

RADIANCE VALUES ARE IN MICROWATTS. VA AND SA ARE IN DEGREES.

FIGURE 54 CONT.

IR MEAN RADIANCE AS A FUNCTION OF SUN AZIMUTH

FILTER 7 AT 1045 AST INSOL ANGLE 43.4 DEG
SPECTRAL BAND 2.54 TO 2.89 MICRONS ELEVATION 26.8 KM

VA	0	10	20	30	40	50	60	70	80	90
SA										
R	0.	0.	0.	0.	0.	0.	0.	0.17	0.	0.
0 A	0.	0.	0.	0.	0.	0.	0.	0.19	0.	0.
L	0.	0.	0.	0.	0.	0.	0.	0.20	0.	0.
R	0.	0.	0.	0.	0.13	0.	0.	0.21	0.	0.
10 A	0.	0.	0.	0.22	0.13	0.	0.	0.19	0.	0.
L	0.	0.	0.	0.22	0.	0.	0.	0.17	0.	0.
R	0.	0.	0.	0.	0.16	0.	0.	0.20	0.	0.
20 A	0.	0.	0.	0.21	0.16	0.	0.	0.19	0.	0.
L	0.	0.	0.	0.21	0.	0.	0.	0.19	0.	0.
R	0.	0.	0.	0.	0.21	0.	0.	0.18	0.	0.
30 A	0.	0.	0.	0.18	0.21	0.	0.	0.18	0.	0.
L	0.	0.	0.	0.18	0.	0.	0.	0.17	0.	0.
R	0.	0.	0.	0.	0.26	0.	0.	0.17	0.	0.
40 A	0.	0.	0.	0.16	0.26	0.	0.	0.17	0.	0.
L	0.	0.	0.	0.16	0.	0.	0.	0.17	0.	0.
R	0.	0.	0.	0.	0.19	0.	0.	0.16	0.	0.
50 A	0.	0.	0.	0.23	0.19	0.	0.	0.17	0.	0.
L	0.	0.	0.	0.23	0.	0.	0.	0.17	0.	0.
R	0.	0.	0.	0.	0.17	0.	0.	0.17	0.	0.
60 A	0.	0.	0.	0.27	0.17	0.	0.	0.17	0.	0.
L	0.	0.	0.	0.27	0.	0.	0.	0.17	0.	0.

RADIANCE VALUES ARE IN MICROWATTS. VA AND SA ARE IN DEGREES.

FIGURE 55

IR MEAN RADIANCE AS A FUNCTION OF SUN AZIMUTH

FILTER 7 AT 1045 AST INSOL ANGLE 43.4 DEG
SPECTRAL BAND 2.54 TO 2.89 MICRONS ELEVATION 26.8 KM

VA	0	10	20	30	40	50	60	70	80	90
SA										
R	0.	0.	0.	0.	0.20	0.	0.	0.16	0.	0.
70 A	0.	0.	0.	0.20	0.20	0.	0.	0.18	0.	0.
L	0.	0.	0.	0.20	0.	0.	0.	0.20	0.	0.
R	0.	0.	0.	0.	0.19	0.	0.	0.17	0.	0.
80 A	0.	0.	0.	0.18	0.19	0.	0.	0.19	0.	0.
L	0.	0.	0.	0.18	0.	0.	0.	0.21	0.	0.
R	0.	0.	0.	0.	0.20	0.	0.	0.21	0.	0.
90 A	0.	0.	0.	0.19	0.20	0.	0.	0.21	0.	0.
L	0.	0.	0.	0.19	0.	0.	0.	0.21	0.	0.
R	0.	0.	0.	0.	0.18	0.	0.	0.17	0.	0.
100 A	0.	0.	0.	0.19	0.18	0.	0.	0.19	0.	0.
L	0.	0.	0.	0.19	0.	0.	0.	0.21	0.	0.
R	0.	0.	0.	0.	0.18	0.	0.	0.17	0.	0.
110 A	0.	0.	0.	0.18	0.18	0.	0.	0.17	0.	0.
L	0.	0.	0.	0.18	0.	0.	0.	0.17	0.	0.
R	0.	0.	0.	0.	0.18	0.	0.	0.18	0.	0.
120 A	0.	0.	0.	0.21	0.18	0.	0.	0.19	0.	0.
L	0.	0.	0.	0.21	0.	0.	0.	0.21	0.	0.

RADIANCE VALUES ARE IN MICROWATTS. VA AND SA ARE IN DEGREES.

FIGURE 55 CONT.

IR MEAN RADIANCE AS A FUNCTION OF SUN AZIMUTH

FILTER 7 AT 1045 AST INSOL ANGLE 43.4 DEG
SPECTRAL BAND 2.54 TO 2.89 MICRONS ELEVATION 26.8 KM

	VA	0	10	20	30	40	50	60	70	80	90
SA											
	R	0.	0.	0.	0.	0.18	0.	0.	0.17	0.	0.
130	A	0.	0.	0.	0.22	0.18	0.	0.	0.18	0.	0.
	L	0.	0.	0.	0.22	0.	0.	0.	0.18	0.	0.
	R	0.	0.	0.	0.	0.18	0.	0.	0.19	0.	0.
140	A	0.	0.	0.	0.19	0.18	0.	0.	0.20	0.	0.
	L	0.	0.	0.	0.19	0.	0.	0.	0.20	0.	0.
	R	0.	0.	0.	0.	0.21	0.	0.	0.17	0.	0.
150	A	0.	0.	0.	0.	0.21	0.	0.	0.17	0.	0.
	L	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
	R	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
160	A	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
	L	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
	R	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
170	A	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
	L	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
	R	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
180	A	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
	L	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.

RADIANCE VALUES ARE IN MICROWATTS. VA AND SA ARE IN DEGREES.

FIGURE 55 CONT.

IR RMS FLUCTUATION AS A FUNCTION OF SUN AZIMUTH

FILTER 7 AT 1045 AST INSOL ANGLE 43.4 DEG
SPECTRAL BAND 2.54 TO 2.89 MICRONS ELEVATION 26.8 KM

VA	0	10	20	30	40	50	60	70	80	90
SA										
R	0.	0.	0.	0.	0.	0.	0.	0.12	0.	0.
A	0.	0.	0.	0.	0.	0.	0.	0.19	0.	0.
L	0.	0.	0.	0.	0.	0.	0.	0.15	0.	0.
R	0.	0.	0.	0.	0.11	0.	0.	0.14	0.	0.
10 A	0.	0.	0.	0.20	0.11	0.	0.	0.19	0.	0.
L	0.	0.	0.	0.20	0.	0.	0.	0.13	0.	0.
R	0.	0.	0.	0.	0.15	0.	0.	0.14	0.	0.
20 A	0.	0.	0.	0.17	0.15	0.	0.	0.21	0.	0.
L	0.	0.	0.	0.17	0.	0.	0.	0.16	0.	0.
R	0.	0.	0.	0.	0.17	0.	0.	0.14	0.	0.
30 A	0.	0.	0.	0.14	0.17	0.	0.	0.19	0.	0.
L	0.	0.	0.	0.14	0.	0.	0.	0.13	0.	0.
R	0.	0.	0.	0.	0.17	0.	0.	0.14	0.	0.
40 A	0.	0.	0.	0.13	0.17	0.	0.	0.19	0.	0.
L	0.	0.	0.	0.13	0.	0.	0.	0.14	0.	0.
R	0.	0.	0.	0.	0.15	0.	0.	0.12	0.	0.
50 A	0.	0.	0.	0.18	0.15	0.	0.	0.19	0.	0.
L	0.	0.	0.	0.18	0.	0.	0.	0.14	0.	0.
R	0.	0.	0.	0.	0.14	0.	0.	0.13	0.	0.
60 A	0.	0.	0.	0.23	0.14	0.	0.	0.19	0.	0.
L	0.	0.	0.	0.23	0.	0.	0.	0.14	0.	0.

RADIANCE VALUES ARE IN MICROWATTS. VA AND SA ARE IN DEGREES.

FIGURE 56

IR RMS FLUCTUATION AS A FUNCTION OF SUN AZIMUTH

FILTER 7 AT 1045 AST INSOL ANGLE 43.4 DEG
SPECTRAL BAND 2.54 TO 2.89 MICRONS ELEVATION 26.8 KM

VA	0	10	20	30	40	50	60	70	80	90
SA										
R	0.	0.	0.	0.	0.17	0.	0.	0.12	0.	0.
70 A	0.	0.	0.	0.16	0.17	0.	0.	0.20	0.	0.
L	0.	0.	0.	0.16	0.	0.	0.	0.16	0.	0.
R	0.	0.	0.	0.	0.15	0.	0.	0.13	0.	0.
80 A	0.	0.	0.	0.14	0.15	0.	0.	0.20	0.	0.
L	0.	0.	0.	0.14	0.	0.	0.	0.15	0.	0.
R	0.	0.	0.	0.	0.16	0.	0.	0.16	0.	0.
90 A	0.	0.	0.	0.16	0.16	0.	0.	0.21	0.	0.
L	0.	0.	0.	0.16	0.	0.	0.	0.14	0.	0.
R	0.	0.	0.	0.	0.13	0.	0.	0.13	0.	0.
100 A	0.	0.	0.	0.13	0.13	0.	0.	0.21	0.	0.
L	0.	0.	0.	0.13	0.	0.	0.	0.16	0.	0.
R	0.	0.	0.	0.	0.14	0.	0.	0.13	0.	0.
110 A	0.	0.	0.	0.13	0.14	0.	0.	0.19	0.	0.
L	0.	0.	0.	0.13	0.	0.	0.	0.14	0.	0.
R	0.	0.	0.	0.	0.13	0.	0.	0.12	0.	0.
120 A	0.	0.	0.	0.15	0.13	0.	0.	0.21	0.	0.
L	0.	0.	0.	0.15	0.	0.	0.	0.17	0.	0.

RADIANCE VALUES ARE IN MICROWATTS. VA AND SA ARE IN DEGREES.

FIGURE 56 CONT.

IR RMS FLUCTUATION AS A FUNCTION OF SUN AZIMUTH

FILTER 7 AT 1045 AST INSOL ANGLE 43.4 DEG
SPECTRAL BAND 2.54 TO 2.89 MICRONS ELEVATION 26.8 KM

	VA	0	10	20	30	40	50	60	70	80	90
SA											
	R	0.	0.	0.	0.	0.15	0.	0.	0.13	0.	0.
130	A	0.	0.	0.	0.16	0.15	0.	0.	0.19	0.	0.
	L	0.	0.	0.	0.16	0.	0.	0.	0.14	0.	0.
	R	0.	0.	0.	0.	0.13	0.	0.	0.12	0.	0.
140	A	0.	0.	0.	0.14	0.13	0.	0.	0.17	0.	0.
	L	0.	0.	0.	0.14	0.	0.	0.	0.12	0.	0.
	R	0.	0.	0.	0.	0.15	0.	0.	0.14	0.	0.
150	A	0.	0.	0.	0.	0.15	0.	0.	0.14	0.	0.
	L	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
	R	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
160	A	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
	L	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
	R	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
170	A	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
	L	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
	R	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
180	A	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
	L	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.

RADIANCE VALUES ARE IN MICROWATTS. VA AND SA ARE IN DEGREES.

FIGURE 56 CONT.

IR NUMBER OF OBSERVATIONS AS A FUNCTION OF SCATTERING ANGLE

FILTER 7 AT 1045 AST INSOL ANGLE 43.4 DEG
SPECTRAL BAND 2.54 TO 2.89 MICRONS ELEVATION 26.8 KM

SA	VA	0	10	20	30	40	50	60	70	80	90
0		0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
10		0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
20		0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
30		0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
40		0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
50		0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
60		0.	0.	0.	0.	0.	0.	0.	435.	0.	0.
70		0.	0.	0.	0.	0.	0.	0.	897.	0.	0.
80		0.	0.	0.	0.	0.	0.	0.	701.	0.	0.
90		0.	0.	0.	0.	105.	0.	0.	525.	0.	0.
100		0.	0.	0.	0.	343.	0.	0.	549.	0.	0.
110		0.	0.	0.	780.	265.	0.	0.	569.	0.	0.
120		0.	0.	0.	426.	248.	0.	0.	550.	0.	0.
130		0.	0.	0.	446.	255.	0.	0.	509.	0.	0.
140		0.	0.	0.	388.	252.	0.	0.	102.	0.	0.
150		0.	0.	0.	244.	268.	0.	0.	0.	0.	0.
160		0.	0.	0.	0.	207.	0.	0.	0.	0.	0.
170		0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
180		0.	0.	0.	0.	0.	0.	0.	0.	0.	0.

RADIANCE VALUES ARE IN MICROWATTS. VA AND SA ARE IN DEGREES.

FIGURE 57

IR MEAN RADIANCE AS A FUNCTION OF SCATTERING ANGLE

FILTER 7 AT 1045 AST INSOL ANGLE 43.4 DEG
SPECTRAL BAND 2.54 TO 2.89 MICRONS ELEVATION 26.8 KM

VA SA	0	10	20	30	40	50	60	70	80	90
0	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
10	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
20	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
30	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
40	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
50	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
60	0.	0.	0.	0.	0.	0.	0.	0.18	0.	0.
70	0.	0.	0.	0.	0.	0.	0.	0.18	0.	0.
80	0.	0.	0.	0.	0.	0.	0.	0.17	0.	0.
90	0.	0.	0.	0.	0.14	0.	0.	0.19	0.	0.
100	0.	0.	0.	0.	0.21	0.	0.	0.19	0.	0.
110	0.	0.	0.	0.19	0.19	0.	0.	0.19	0.	0.
120	0.	0.	0.	0.21	0.19	0.	0.	0.18	0.	0.
130	0.	0.	0.	0.19	0.18	0.	0.	0.18	0.	0.
140	0.	0.	0.	0.19	0.18	0.	0.	0.18	0.	0.
150	0.	0.	0.	0.22	0.18	0.	0.	0.	0.	0.
160	0.	0.	0.	0.	0.21	0.	0.	0.	0.	0.
170	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
180	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.

RADIANCE VALUES ARE IN MICROWATTS. VA AND SA ARE IN DEGREES.

FIGURE 58

IR RMS FLUCTUATION AS A FUNCTION OF SCATTERING ANGLE

FILTER 7 AT 1045 AST INSOL ANGLE 43.4 DEG
SPECTRAL BAND 2.54 TO 2.89 MICRONS ELEVATION 26.8 KM

SA	VA	0	10	20	30	40	50	60	70	80	90
0	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
10	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
20	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
30	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
40	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
50	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
60	0.	0.	0.	0.	0.	0.	0.	0.	0.13	0.	0.
70	0.	0.	0.	0.	0.	0.	0.	0.	0.14	0.	0.
80	0.	0.	0.	0.	0.	0.	0.	0.	0.14	0.	0.
90	0.	0.	0.	0.	0.	0.13	0.	0.	0.15	0.	0.
100	0.	0.	0.	0.	0.	0.17	0.	0.	0.14	0.	0.
110	0.	0.	0.	0.16	0.16	0.	0.	0.	0.15	0.	0.
120	0.	0.	0.	0.18	0.15	0.	0.	0.	0.14	0.	0.
130	0.	0.	0.	0.14	0.13	0.	0.	0.	0.13	0.	0.
140	0.	0.	0.	0.14	0.14	0.	0.	0.	0.13	0.	0.
150	0.	0.	0.	0.16	0.14	0.	0.	0.	0.	0.	0.
160	0.	0.	0.	0.	0.15	0.	0.	0.	0.	0.	0.
170	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
180	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.

RADIANCE VALUES ARE IN MICROWATTS. VA AND SA ARE IN DEGREES.

FIGURE 59

IR NUMBER OF OBSERVATIONS AS A FUNCTION OF SUN AZIMUTH

FILTER 6 AT 1049 AST INSOL ANGLE 43.1 DEG
SPECTRAL BAND 2.50 TO 2.78 MICRONS ELEVATION 27.6 KM

VA	0	10	20	30	40	50	60	70	80	90
SA										
R	0.	0.	0.	0.	0.	60.	0.	60.	0.	0.
0 A	0.	0.	0.	0.	0.	90.	0.	75.	0.	0.
L	0.	0.	0.	0.	0.	120.	0.	90.	0.	0.
R	0.	0.	0.	15.	0.	0.	0.	90.	0.	0.
10 A	0.	0.	0.	8.	0.	68.	0.	127.	0.	0.
L	0.	0.	0.	0.	0.	135.	0.	164.	0.	0.
R	0.	0.	0.	60.	0.	0.	148.	135.	0.	0.
20 A	0.	0.	0.	30.	0.	75.	74.	165.	0.	0.
L	0.	0.	0.	0.	0.	150.	0.	194.	0.	0.
R	0.	0.	0.	74.	0.	0.	195.	150.	0.	0.
30 A	0.	0.	0.	37.	0.	83.	98.	180.	0.	0.
L	0.	0.	0.	0.	0.	165.	0.	210.	0.	0.
R	0.	0.	0.	105.	0.	0.	178.	165.	0.	0.
40 A	0.	0.	0.	53.	0.	98.	89.	180.	0.	0.
L	0.	0.	0.	0.	0.	195.	0.	195.	0.	0.
R	0.	0.	0.	74.	0.	0.	165.	180.	0.	0.
50 A	0.	0.	0.	37.	0.	83.	83.	180.	0.	0.
L	0.	0.	0.	0.	0.	165.	0.	180.	0.	0.
R	0.	0.	45.	120.	0.	0.	195.	75.	0.	0.
60 A	0.	0.	23.	60.	0.	113.	98.	120.	0.	0.
L	0.	0.	0.	0.	0.	225.	0.	165.	0.	0.

RADIANCE VALUES ARE IN MICROWATTS. VA AND SA ARE IN DEGREES.

FIGURE 60

IR NUMBER OF OBSERVATIONS AS A FUNCTION OF SUN AZIMUTH

FILTER 6 AT 1049 AST INSOL ANGLE 43.1 DEG
SPECTRAL BAND 2.50 TO 2.78 MICRONS ELEVATION 27.6 KM

VA SA	0	10	20	30	40	50	60	70	80	90
R	0.	0.	0.	149.	0.	0.	180.	75.	0.	0.
70 A	0.	0.	0.	75.	0.	97.	90.	150.	0.	0.
L	0.	0.	0.	0.	0.	194.	0.	225.	0.	0.
R	0.	0.	0.	150.	0.	75.	90.	195.	0.	0.
80 A	0.	0.	0.	75.	0.	112.	45.	179.	0.	0.
L	0.	0.	0.	0.	0.	149.	0.	162.	0.	0.
R	0.	0.	0.	135.	0.	45.	165.	150.	0.	0.
90 A	0.	0.	0.	68.	0.	120.	83.	171.	0.	0.
L	0.	0.	0.	0.	0.	195.	0.	191.	0.	0.
R	0.	0.	0.	165.	0.	0.	165.	119.	0.	0.
100 A	0.	0.	0.	83.	0.	83.	83.	164.	0.	0.
L	0.	0.	0.	0.	0.	165.	0.	209.	0.	0.
R	0.	0.	0.	44.	0.	0.	195.	105.	0.	0.
110 A	0.	0.	0.	22.	0.	98.	98.	128.	0.	0.
L	0.	0.	0.	0.	0.	195.	0.	150.	0.	0.
R	0.	0.	0.	150.	0.	0.	225.	195.	0.	0.
120 A	0.	0.	0.	75.	0.	53.	113.	180.	0.	0.
L	0.	0.	0.	0.	0.	105.	0.	165.	0.	0.

RADIANCE VALUES ARE IN MICROWATTS. VA AND SA ARE IN DEGREES.

FIGURE 60 CONT.

IR NUMBER OF OBSERVATIONS AS A FUNCTION OF SUN AZIMUTH

FILTER 6 AT 1049 AST INSOL ANGLE 43.1 DEG
SPECTRAL BAND 2.50 TO 2.78 MICRONS ELEVATION 27.6 KN

VA SA	0	10	20	30	40	50	60	70	80	90
R	0.	0.	0.	119.	0.	15.	150.	165.	0.	0.
130 A	0.	0.	0.	60.	0.	128.	75.	180.	0.	0.
L	0.	0.	0.	0.	0.	240.	0.	195.	0.	0.
R	0.	0.	0.	147.	0.	0.	195.	180.	0.	0.
140 A	0.	0.	0.	74.	0.	60.	98.	105.	0.	0.
L	0.	0.	0.	0.	0.	120.	0.	30.	0.	0.
R	0.	0.	0.	178.	0.	15.	90.	135.	0.	0.
150 A	0.	0.	0.	89.	0.	8.	45.	68.	0.	0.
L	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
R	0.	0.	0.	0.	0.	0.	0.	30.	0.	0.
160 A	0.	0.	0.	0.	0.	0.	0.	15.	0.	0.
L	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
R	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
170 A	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
L	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
R	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
180 A	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
L	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.

RADIANCE VALUES ARE IN MICROWATTS. VA AND SA ARE IN DEGREES.

FIGURE 60 CONT.

IR MEAN RADIANCE AS A FUNCTION OF SUN AZIMUTH

FILTER 6 AT 1049 AST INSOL ANGLE 43.1 DEG
SPECTRAL BAND 2.50 TO 2.78 MICRONS ELEVATION 27.6 KM

VA	0	10	20	30	40	50	60	70	80	90
SA										
R	0.	0.	0.	0.	0.	0.17	0.	0.85	0.	0.
A	0.	0.	0.	0.	0.	0.17	0.	0.84	0.	0.
L	0.	0.	0.	0.	0.	0.17	0.	0.84	0.	0.
R	0.	0.	0.	0.63	0.	0.	0.	0.45	0.	0.
10 A	0.	0.	0.	0.63	0.	0.19	0.	0.78	0.	0.
L	0.	0.	0.	0.	0.	0.19	0.	0.96	0.	0.
R	0.	0.	0.	0.17	0.	0.	0.30	0.44	0.	0.
20 A	0.	0.	0.	0.17	0.	0.19	0.30	0.75	0.	0.
L	0.	0.	0.	0.	0.	0.19	0.	0.97	0.	0.
R	0.	0.	0.	0.19	0.	0.	0.20	0.47	0.	0.
30 A	0.	0.	0.	0.19	0.	0.20	0.20	0.58	0.	0.
L	0.	0.	0.	0.	0.	0.20	0.	0.65	0.	0.
R	0.	0.	0.	0.17	0.	0.	0.20	0.45	0.	0.
40 A	0.	0.	0.	0.17	0.	0.15	0.20	0.44	0.	0.
L	0.	0.	0.	0.	0.	0.15	0.	0.44	0.	0.
R	0.	0.	0.	0.20	0.	0.	0.19	0.47	0.	0.
50 A	0.	0.	0.	0.20	0.	0.18	0.19	0.54	0.	0.
L	0.	0.	0.	0.	0.	0.18	0.	0.60	0.	0.
R	0.	0.	0.21	0.20	0.	0.	0.18	0.48	0.	0.
60 A	0.	0.	0.21	0.20	0.	0.20	0.18	0.51	0.	0.
L	0.	0.	0.	0.	0.	0.20	0.	0.52	0.	0.

RADIANCE VALUES ARE IN MICROWATTS. VA AND SA ARE IN DEGREES.

FIGURE 61

IR MEAN RADIANCE AS A FUNCTION OF SUN AZIMUTH

FILTER 6 AT 1049 AST INSOL ANGLE 43.1 DEG
SPECTRAL BAND 2.50 TO 2.78 MICRONS ELEVATION 27.6 KM

VA	0	10	20	30	40	50	60	70	80	90
SA										
R	0.	0.	0.	0.17	0.	0.	0.20	0.58	0.	0.
70 A	0.	0.	0.	0.17	0.	0.18	0.20	0.49	0.	0.
L	0.	0.	0.	0.	0.	0.18	0.	0.46	0.	0.
R	0.	0.	0.	0.23	0.	0.33	0.26	0.55	0.	0.
80 A	0.	0.	0.	0.23	0.	0.26	0.26	0.59	0.	0.
L	0.	0.	0.	0.	0.	0.23	0.	0.63	0.	0.
R	0.	0.	0.	0.42	0.	0.37	0.38	0.47	0.	0.
90 A	0.	0.	0.	0.42	0.	0.81	0.38	0.35	0.	0.
L	0.	0.	0.	0.	0.	0.91	0.	0.25	0.	0.
R	0.	0.	0.	0.22	0.	0.	0.43	0.67	0.	0.
100 A	0.	0.	0.	0.22	0.	1.08	0.43	0.44	0.	0.
L	0.	0.	0.	0.	0.	1.08	0.	0.31	0.	0.
R	0.	0.	0.	0.34	0.	0.	0.42	0.84	0.	0.
110 A	0.	0.	0.	0.34	0.	0.82	0.42	0.52	0.	0.
L	0.	0.	0.	0.	0.	0.82	0.	0.30	0.	0.
R	0.	0.	0.	0.38	0.	0.	0.71	1.26	0.	0.
120 A	0.	0.	0.	0.38	0.	0.89	0.71	0.82	0.	0.
L	0.	0.	0.	0.	0.	0.89	0.	0.29	0.	0.

RADIANCE VALUES ARE IN MICROWATTS. VA AND SA ARE IN DEGREES.

FIGURE 61 CONT.

IR MEAN RADIANCE AS A FUNCTION OF SUN AZIMUTH

FILTER 6 AT 1049 AST INSOL ANGLE 43.1 DEG
SPECTRAL BAND 2.50 TO 2.78 MICRONS ELEVATION 27.6 KM

SA	VA	0	10	20	30	40	50	60	70	80	90
	R	0.	0.	0.	0.20	0.	0.20	0.22	1.61	0.	0.
130	A	0.	0.	0.	0.20	0.	1.23	0.22	1.07	0.	0.
	L	0.	0.	0.	0.	0.	1.30	0.	0.62	0.	0.
	R	0.	0.	0.	0.20	0.	0.	0.19	1.17	0.	0.
140	A	0.	0.	0.	0.20	0.	0.65	0.19	1.05	0.	0.
	L	0.	0.	0.	0.	0.	0.65	0.	0.36	0.	0.
	R	0.	0.	0.	0.20	0.	0.17	0.19	0.63	0.	0.
150	A	0.	0.	0.	0.20	0.	0.17	0.19	0.63	0.	0.
	L	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
	R	0.	0.	0.	0.	0.	0.	0.	0.47	0.	0.
160	A	0.	0.	0.	0.	0.	0.	0.	0.47	0.	0.
	L	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
	R	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
170	A	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
	L	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
	R	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
180	A	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
	L	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.

RADIANCE VALUES ARE IN MICROWATTS. VA AND SA ARE IN DEGREES.

FIGURE 61 CONT.

IR RMS FLUCTUATION AS A FUNCTION OF SUN AZIMUTH

FILTER 6 AT 1049 AST INSOL ANGLE 43.1 DEG
SPECTRAL BAND 2.50 TO 2.78 MICRONS ELEVATION 27.6 KM

VA	0	10	20	30	40	50	60	70	80	90
SA										
R	0.	0.	0.	0.	0.	0.12	0.	0.24	0.	0.
0 A	0.	0.	0.	0.	0.	0.19	0.	0.34	0.	0.
L	0.	0.	0.	0.	0.	0.14	0.	0.24	0.	0.
R	0.	0.	0.	0.32	0.	0.	0.	0.21	0.	0.
10 A	0.	0.	0.	0.32	0.	0.13	0.	0.38	0.	0.
L	0.	0.	0.	0.	0.	0.13	0.	0.32	0.	0.
R	0.	0.	0.	0.17	0.	0.	0.22	0.22	0.	0.
20 A	0.	0.	0.	0.17	0.	0.15	0.22	0.38	0.	0.
L	0.	0.	0.	0.	0.	0.15	0.	0.31	0.	0.
R	0.	0.	0.	0.16	0.	0.	0.14	0.19	0.	0.
30 A	0.	0.	0.	0.16	0.	0.15	0.14	0.32	0.	0.
L	0.	0.	0.	0.	0.	0.15	0.	0.26	0.	0.
R	0.	0.	0.	0.14	0.	0.	0.15	0.23	0.	0.
40 A	0.	0.	0.	0.14	0.	0.12	0.15	0.34	0.	0.
L	0.	0.	0.	0.	0.	0.12	0.	0.26	0.	0.
R	0.	0.	0.	0.16	0.	0.	0.13	0.25	0.	0.
50 A	0.	0.	0.	0.16	0.	0.14	0.13	0.35	0.	0.
L	0.	0.	0.	0.	0.	0.14	0.	0.24	0.	0.
R	0.	0.	0.16	0.15	0.	0.	0.14	0.19	0.	0.
60 A	0.	0.	0.16	0.15	0.	0.15	0.14	0.29	0.	0.
L	0.	0.	0.	0.	0.	0.15	0.	0.22	0.	0.

RADIANCE VALUES ARE IN MICROWATTS. VA AND SA ARE IN DEGREES.

FIGURE 62

IR RMS FLUCTUATION AS A FUNCTION OF SUN AZIMUTH

FILTER 6 AT 1049 AST INSOL ANGLE 43.1 DEG
SPECTRAL BAND 2.50 TO 2.78 MICRONS ELEVATION 27.6 KM

VA	0	10	20	30	40	50	60	70	80	90
SA										
R	0.	0.	0.	0.12	0.	0.	0.15	0.22	0.	0.
70 A	0.	0.	0.	0.12	0.	0.15	0.15	0.33	0.	0.
L	0.	0.	0.	0.	0.	0.15	0.	0.24	0.	0.
R	0.	0.	0.	0.19	0.	0.21	0.19	0.24	0.	0.
80 A	0.	0.	0.	0.19	0.	0.26	0.19	0.48	0.	0.
L	0.	0.	0.	0.	0.	0.16	0.	0.41	0.	0.
R	0.	0.	0.	0.27	0.	0.22	0.21	0.22	0.	0.
90 A	0.	0.	0.	0.27	0.	0.70	0.21	0.30	0.	0.
L	0.	0.	0.	0.	0.	0.67	0.	0.19	0.	0.
R	0.	0.	0.	0.16	0.	0.	0.24	0.26	0.	0.
100 A	0.	0.	0.	0.16	0.	0.60	0.24	0.33	0.	0.
L	0.	0.	0.	0.	0.	0.60	0.	0.21	0.	0.
R	0.	0.	0.	0.23	0.	0.	0.25	0.31	0.	0.
110 A	0.	0.	0.	0.23	0.	0.58	0.25	0.38	0.	0.
L	0.	0.	0.	0.	0.	0.58	0.	0.22	0.	0.
R	0.	0.	0.	0.21	0.	0.	0.25	0.37	0.	0.
120 A	0.	0.	0.	0.21	0.	0.75	0.25	0.41	0.	0.
L	0.	0.	0.	0.	0.	0.75	0.	0.20	0.	0.

RADIANCE VALUES ARE IN MICROWATTS. VA AND SA ARE IN DEGREES.

FIGURE 62 CONT.

IR RMS FLUCTUATION AS A FUNCTION OF SUN AZIMUTH

FILTER 6 AT 1049 AST INSOL ANGLE 43.1 DEG
SPECTRAL BAND 2.50 TO 2.78 MICRONS ELEVATION 27.6 KM

	VA	0	10	20	30	40	50	60	70	80	90
SA											
	R	0.	0.	0.	0.15	0.	0.15	0.15	0.28	0.	0.
130	A	0.	0.	0.	0.15	0.	0.50	0.15	0.42	0.	0.
	L	0.	0.	0.	0.	0.	0.48	0.	0.32	0.	0.
	R	0.	0.	0.	0.15	0.	0.	0.15	0.28	0.	0.
140	A	0.	0.	0.	0.15	0.	0.37	0.15	0.35	0.	0.
	L	0.	0.	0.	0.	0.	0.37	0.	0.21	0.	0.
	R	0.	0.	0.	0.14	0.	0.11	0.14	0.28	0.	0.
150	A	0.	0.	0.	0.14	0.	0.11	0.14	0.28	0.	0.
	L	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
	R	0.	0.	0.	0.	0.	0.	0.	0.20	0.	0.
160	A	0.	0.	0.	0.	0.	0.	0.	0.20	0.	0.
	L	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
	R	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
170	A	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
	L	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
	R	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
180	A	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
	L	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.

RADIANCE VALUES ARE IN MICROWATTS. VA AND SA ARE IN DEGREES.

FIGURE 62 CONT.

IR NUMBER OF OBSERVATIONS AS A FUNCTION OF SCATTERING ANGLE

FILTER 6 AT 1049 ÅST INSOL ANGLE 43.1 DEG
SPECTRAL BAND 2.50 TO 2.78 MICRONS ELEVATION 27.6 KM

SA	VA	0	10	20	30	40	50	60	70	80	90
0		0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
10		0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
20		0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
30		0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
40		0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
50		0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
60		0.	0.	0.	0.	0.	0.	0.	269.	0.	0.
70		0.	0.	0.	0.	0.	0.	0.	1004.	0.	0.
80		0.	0.	0.	0.	0.	0.	223.	690.	0.	0.
90		0.	0.	0.	0.	0.	690.	478.	464.	0.	0.
100		0.	0.	0.	0.	0.	480.	345.	549.	0.	0.
110		0.	0.	0.	179.	0.	478.	210.	478.	0.	0.
120		0.	0.	45.	403.	0.	285.	285.	405.	0.	0.
130		0.	0.	0.	390.	0.	300.	270.	540.	0.	0.
140		0.	0.	0.	239.	0.	255.	285.	270.	0.	0.
150		0.	0.	0.	341.	0.	240.	240.	60.	0.	0.
160		0.	0.	0.	133.	0.	0.	0.	0.	0.	0.
170		0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
180		0.	0.	0.	0.	0.	0.	0.	0.	0.	0.

RADIANCE VALUES ARE IN MICROWATTS. VA AND SA ARE IN DEGREES.

FIGURE 63

IR MEAN RADIANCE AS A FUNCTION OF SCATTERING ANGLE

FILTER 6 AT 1049 AST INSOL ANGLE 43.1 DEG
SPECTRAL BAND 2.50 TO 2.78 MICRONS ELEVATION 27.6 KM

VA	0	10	20	30	40	50	60	70	80	90
SA										
0	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
10	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
20	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
30	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
40	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
50	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
60	0.	0.	0.	0.	0.	0.	0.	0.90	0.	0.
70	0.	0.	0.	0.	0.	0.	0.	0.60	0.	0.
80	0.	0.	0.	0.	0.	0.	0.27	0.52	0.	0.
90	0.	0.	0.	0.	0.	0.18	0.20	0.54	0.	0.
100	0.	0.	0.	0.	0.	0.18	0.18	0.42	0.	0.
110	0.	0.	0.	0.22	0.	0.23	0.31	0.43	0.	0.
120	0.	0.	0.21	0.18	0.	1.00	0.39	0.59	0.	0.
130	0.	0.	0.	0.29	0.	0.81	0.61	1.07	0.	0.
140	0.	0.	0.	0.33	0.	1.17	0.36	0.97	0.	0.
150	0.	0.	0.	0.21	0.	0.80	0.19	0.46	0.	0.
160	0.	0.	0.	0.19	0.	0.	0.	0.	0.	0.
170	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
180	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.

RADIANCE VALUES ARE IN MICROWATTS. VA AND SA ARE IN DEGREES.

FIGURE 64

IR RMS FLUCTUATION AS A FUNCTION OF SCATTERING ANGLE

FILTER 6 AT 1049 ÅST INSOL. ANGLE 43.1 DEG
SPECTRAL BAND 2.50 TO 2.78 MICRONS ELEVATION 27.6 KM

VA	0	10	20	30	40	50	60	70	80	90
SA										
0	0.	0.	0	0.	0.	0.	0.	0.	0.	0.
10	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
20	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
30	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
40	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
50	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
60	0.	0.	0.	0.	0.	0.	0.	0.28	0.	0.
70	0.	0.	0.	0.	0.	0.	0.	0.33	0.	0.
80	0.	0.	0.	0.	0.	0.	0.20	0.25	0.	0.
90	0.	0.	0.	0.	0.	0.14	0.14	0.30	0.	0.
100	0.	0.	0.	0.	0.	0.14	0.14	0.27	0.	0.
110	0.	0.	0.	0.22	0.	0.17	0.21	0.27	0.	0.
120	0.	0.	0.16	0.14	0.	0.69	0.23	0.43	0.	0.
130	0.	0.	0.	0.23	0.	0.54	0.28	0.58	0.	0.
140	0.	0.	0.	0.22	0.	0.72	0.30	0.35	0.	0.
150	0.	0.	0.	0.16	0.	0.41	0.14	0.20	0.	0.
160	0.	0.	0.	0.14	0.	0.	0.	0.	0.	0.
170	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
180	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.

RADIANCE VALUES ARE IN MICROWATTS. VA AND SA ARE IN DEGREES.

FIGURE 65

IR NUMBER OF OBSERVATIONS AS A FUNCTION OF SUN AZINUTH

FILTER 5 AT 1055 AST INSOL ANGLE 42.9 DEG
SPECTRAL BAND 1.57 TO 2.98 MICRONS ELEVATION 28.9 KM

VA SA	0	10	20	30	40	50	60	70	80	90
R	0.	0.	0.	0.	0.	45.	0.	45.	0.	0.
0 A	0.	0.	0.	0.	0.	75.	0.	75.	0.	0.
L	0.	0.	0.	0.	0.	105.	0.	105.	0.	0.
R	0.	0.	0.	0.	0.	0.	0.	192.	0.	0.
10 A	0.	0.	0.	0.	0.	90.	0.	186.	0.	0.
L	0.	0.	0.	0.	0.	180.	0.	180.	0.	0.
R	0.	0.	0.	222.	0.	0.	0.	164.	0.	0.
20 A	0.	0.	0.	111.	0.	90.	0.	172.	0.	0.
L	0.	0.	0.	0.	0.	180.	0.	180.	0.	0.
R	0.	0.	0.	180.	0.	0.	0.	224.	0.	0.
30 A	0.	0.	0.	90.	0.	90.	0.	202.	0.	0.
L	0.	0.	0.	0.	0.	180.	0.	180.	0.	0.
R	0.	0.	0.	165.	0.	0.	0.	195.	0.	0.
40 A	0.	0.	0.	83.	0.	98.	0.	188.	0.	0.
L	0.	0.	0.	0.	0.	195.	0.	180.	0.	0.
R	0.	0.	0.	165.	0.	0.	0.	165.	0.	0.
50 A	0.	0.	0.	83.	0.	90.	0.	165.	0.	0.
L	0.	0.	0.	0.	0.	180.	0.	165.	0.	0.
R	0.	0.	0.	179.	0.	0.	0.	224.	0.	0.
60 A	0.	0.	0.	90.	0.	83.	0.	210.	0.	0.
L	0.	0.	0.	0.	0.	165.	0.	195.	0.	0.

RADIANCE VALUES ARE IN MICROWATTS. VA AND SA ARE IN DEGREES.

FIGURE 66

IR NUMBER OF OBSERVATIONS AS A FUNCTION OF SUN AZIMUTH

FILTER 5 AT 1055 AST INSOL ANGLE 42.9 DEG
SPECTRAL BAND 1.57 TO 2.98 MICRONS ELEVATION 28.9 KM

VA SA	0	10	20	30	40	50	60	70	80	90
R	0.	0.	0.	195.	0.	0.	0.	164.	0.	0.
70 A	0.	0.	0.	98.	0.	105.	0.	157.	0.	0.
L	0.	0.	0.	0.	0.	210.	0.	150.	0.	0.
R	0.	0.	0.	180.	0.	0.	0.	135.	0.	0.
80 A	0.	0.	0.	90.	0.	98.	0.	158.	0.	0.
L	0.	0.	0.	0.	0.	195.	0.	180.	0.	0.
R	0.	0.	0.	150.	0.	0.	0.	135.	0.	0.
90 A	0.	0.	0.	75.	0.	75.	0.	165.	0.	0.
L	0.	0.	0.	0.	0.	150.	0.	195.	0.	0.
R	0.	0.	0.	210.	0.	0.	0.	75.	0.	0.
100 A	0.	0.	0.	105.	0.	98.	0.	143.	0.	0.
L	0.	0.	0.	0.	0.	195.	0.	210.	0.	0.
R	0.	0.	0.	210.	0.	0.	0.	209.	0.	0.
110 A	0.	0.	0.	105.	0.	83.	0.	202.	0.	0.
L	0.	0.	0.	0.	0.	165.	0.	195.	0.	0.
R	0.	0.	0.	210.	0.	0.	0.	210.	0.	0.
120 A	0.	0.	0.	105.	0.	83.	0.	203.	0.	0.
L	0.	0.	0.	0.	0.	165.	0.	195.	0.	0.

RADIANCE VALUES ARE IN MICROWATTS. VA AND SA ARE IN DEGREES.

FIGURE 66 CONT.

IR NUMBER OF OBSERVATIONS AS A FUNCTION OF SUN AZIMUTH

FILTER 5 AT 1055 AST INSOL ANGLE 42.9 DEG
SPECTRAL BAND 1.57 TO 2.98 MICRONS ELEVATION 28.9 KM

VA SA	0	10	20	30	40	50	60	70	80	90
R	0.	0.	0.	179.	0.	0.	0.	104.	0.	0.
130 A	0.	0.	0.	90.	0.	90.	0.	157.	0.	0.
L	0.	0.	0.	0.	0.	180.	0.	210.	0.	0.
R	0.	0.	0.	195.	0.	0.	0.	119.	0.	0.
140 A	0.	0.	0.	98.	0.	30.	0.	127.	0.	0.
L	0.	0.	0.	0.	0.	60.	0.	135.	0.	0.
R	0.	0.	0.	179.	0.	0.	0.	60.	0.	0.
150 A	0.	0.	0.	90.	0.	0.	0.	30.	0.	0.
L	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
R	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
160 A	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
L	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
R	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
170 A	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
L	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
R	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
180 A	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
L	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.

RADIANCE VALUES ARE IN MICROWATTS. VA AND SA ARE IN DEGREES.

FIGURE 66 CONT.

IR MEAN RADIANCE AS A FUNCTION OF SUN AZINUTH

FILTER 5 AT 1055 AST INSOL ANGLE 42.9 DEG
SPECTRAL BAND 1.57 TO 2.98 MICRONS ELEVATION 28.9 KM

VA	0	10	20	30	40	50	60	70	80	90
SA										
R	0.	0.	0.	0.	0.	43.79	0.	43.30	0.	0.
0 A	0.	0.	0.	0.	0.	44.51	0.	43.26	0.	0.
L	0.	0.	0.	0.	0.	44.81	0.	43.24	0.	0.
R	0.	0.	0.	0.	0.	0.	0.	43.47	0.	0.
10 A	0.	0.	0.	0.	0.	44.71	0.	43.52	0.	0.
L	0.	0.	0.	0.	0.	44.71	0.	43.57	0.	0.
R	0.	0.	0.	31.38	0.	0.	0.	43.70	0.	0.
20 A	0.	0.	0.	31.38	0.	14.62	0.	44.47	0.	0.
L	0.	0.	0.	0.	0.	14.62	0.	45.16	0.	0.
R	0.	0.	0.	41.90	0.	0.	0.	42.95	0.	0.
30 A	0.	0.	0.	41.90	0.	41.57	0.	45.42	0.	0.
L	0.	0.	0.	0.	0.	41.57	0.	48.50	0.	0.
R	0.	0.	0.	38.36	0.	0.	0.	43.64	0.	0.
40 A	0.	0.	0.	38.36	0.	45.27	0.	45.83	0.	0.
L	0.	0.	0.	0.	0.	45.27	0.	48.21	0.	0.
R	0.	0.	0.	33.37	0.	0.	0.	43.31	0.	0.
50 A	0.	0.	0.	33.37	0.	48.02	0.	46.36	0.	0.
L	0.	0.	0.	0.	0.	48.02	0.	49.41	0.	0.
R	0.	0.	0.	25.82	0.	0.	0.	43.04	0.	0.
60 A	0.	0.	0.	25.82	0.	45.74	0.	44.74	0.	0.
L	0.	0.	0.	0.	0.	45.74	0.	46.70	0.	0.

RADIANCE VALUES ARE IN MICROWATTS. VA AND SA ARE IN DEGREES.

FIGURE 67

IR MEAN RADIANCE AS A FUNCTION OF SUN AZIMUTH

FILTER 5 AT 1055 AST INSOL ANGLE 42.9 DEG
SPECTRAL BAND 1.57 TO 2.98 MICRONS ELEVATION 28.9 KM

VA SA	0	10	20	30	40	50	60	70	80	90
R	0.	0.	0.	24.25	0.	0.	0.	41.85	0.	0.
70 A	0.	0.	0.	24.25	0.	51.50	0.	43.74	0.	0.
L	0.	0.	0.	0.	0.	51.50	0.	45.80	0.	0.
R	0.	0.	0.	25.00	0.	0.	0.	44.57	0.	0.
80 A	0.	0.	0.	25.00	0.	48.65	0.	47.79	0.	0.
L	0.	0.	0.	0.	0.	48.65	0.	50.21	0.	0.
R	0.	0.	0.	35.62	0.	0.	0.	49.73	0.	0.
90 A	0.	0.	0.	35.62	0.	48.72	0.	50.15	0.	0.
L	0.	0.	0.	0.	0.	48.72	0.	50.44	0.	0.
R	0.	0.	0.	48.58	0.	0.	0.	41.52	0.	0.
100 A	0.	0.	0.	48.58	0.	42.87	0.	38.79	0.	0.
L	0.	0.	0.	0.	0.	42.87	0.	37.81	0.	0.
R	0.	0.	0.	47.78	0.	0.	0.	42.24	0.	0.
110 A	0.	0.	0.	47.78	0.	47.69	0.	36.33	0.	0.
L	0.	0.	0.	0.	0.	47.69	0.	30.00	0.	0.
R	0.	0.	0.	50.38	0.	0.	0.	42.30	0.	0.
120 A	0.	0.	0.	50.38	0.	47.40	0.	35.26	0.	0.
L	0.	0.	0.	0.	0.	47.40	0.	27.68	0.	0.

RADIANCE VALUES ARE IN MICROWATTS. VA AND SA ARE IN DEGREES.

IR MEAN RADIANCE AS A FUNCTION OF SUN AZIMUTH

FILTER 5 AT 1055 AST INSOL ANGLE 42.9 DEG
SPECTRAL BAND 1.57 TO 2.98 MICRONS ELEVATION 28.9 KM

	VA	0	10	20	30	40	50	60	70	80	90
SA											
	R	0.	0.	0.	49.25	0.	0.	0.	41.98	0.	0.
130	A	0.	0.	0.	49.25	0.	42.34	0.	38.44	0.	0.
	L	0.	0.	0.	0.	0.	42.34	0.	36.68	0.	0.
	R	0.	0.	0.	44.58	0.	0.	0.	42.55	0.	0.
140	A	0.	0.	0.	44.58	0.	32.83	0.	37.07	0.	0.
	L	0.	0.	0.	0.	0.	32.83	0.	32.25	0.	0.
	R	0.	0.	0.	29.54	0.	0.	0.	41.19	0.	0.
150	A	0.	0.	0.	29.54	0.	0.	0.	41.19	0.	0.
	L	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
	R	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
160	A	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
	L	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
	R	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
170	A	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
	L	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
	R	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
180	A	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
	L	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.

RADIANCE VALUES ARE IN MICROWATTS. VA AND SA ARE IN DEGREES.

FIGURE 67 CONT.

IR RMS FLUCTUATION AS A FUNCTION OF SUN AZIMUTH

FILTER 5 AT 1055 AST INSOL ANGLE 42.9 DEG
SPECTRAL BAND 1.57 TO 2.98 MICRONS ELEVATION 28.9 KM

VA	0	10	20	30	40	50	60	70	80	90
SA										
R	0.	0.	0.	0.	0.	2.73	0.	1.78	0.	0.
0 A	0.	0.	0.	0.	0.	4.80	0.	2.57	0.	0.
L	0.	0.	0.	0.	0.	3.95	0.	1.85	0.	0.
R	0.	0.	0.	0.	0.	0.	0.	1.59	0.	0.
10 A	0.	0.	0.	0.	0.	2.82	0.	1.91	0.	0.
L	0.	0.	0.	0.	0.	2.82	0.	1.06	0.	0.
R	0.	0.	0.	14.25	0.	0.	0.	1.35	0.	0.
20 A	0.	0.	0.	14.25	0.	7.63	0.	2.17	0.	0.
L	0.	0.	0.	0.	0.	7.63	0.	1.70	0.	0.
R	0.	0.	0.	4.89	0.	0.	0.	1.17	0.	0.
30 A	0.	0.	0.	4.89	0.	8.47	0.	2.38	0.	0.
L	0.	0.	0.	0.	0.	8.47	0.	2.07	0.	0.
R	0.	0.	0.	7.55	0.	0.	0.	1.53	0.	0.
40 A	0.	0.	0.	7.55	0.	3.94	0.	3.12	0.	0.
L	0.	0.	0.	0.	0.	3.94	0.	2.71	0.	0.
R	0.	0.	0.	4.76	0.	0.	0.	1.62	0.	0.
50 A	0.	0.	0.	4.76	0.	2.57	0.	2.83	0.	0.
L	0.	0.	0.	0.	0.	2.57	0.	2.31	0.	0.
R	0.	0.	0.	2.94	0.	0.	0.	2.19	0.	0.
60 A	0.	0.	0.	2.94	0.	3.01	0.	3.27	0.	0.
L	0.	0.	0.	0.	0.	3.01	0.	2.42	0.	0.

RADIANCE VALUES ARE IN MICROWATTS. VA AND SA ARE IN DEGREES.

FIGURE 68

IR RMS FLUCTUATION AS A FUNCTION OF SUN AZINUTH

FILTER 5 AT 1055 AST INSOL ANGLE 42.9 DEG
SPECTRAL BAND 1.57 TO 2.98 MICRONS ELEVATION 28.9 KM

VA	0	10	20	30	40	50	60	70	80	90
SA										
R	0.	0.	0.	6.32	0.	0.	0.	1.28	0.	0.
70 A	0.	0.	0.	6.32	0.	1.54	0.	3.72	0.	0.
L	0.	0.	0.	0.	0.	1.54	0.	3.50	0.	0.
R	0.	0.	0.	10.25	0.	0.	0.	1.49	0.	0.
80 A	0.	0.	0.	10.25	0.	2.17	0.	2.23	0.	0.
L	0.	0.	0.	0.	0.	2.17	0.	1.66	0.	0.
R	0.	0.	0.	7.76	0.	0.	0.	2.37	0.	0.
90 A	0.	0.	0.	7.76	0.	3.78	0.	3.10	0.	0.
L	0.	0.	0.	0.	0.	3.78	0.	2.00	0.	0.
R	0.	0.	0.	3.83	0.	0.	0.	1.19	0.	0.
100 A	0.	0.	0.	3.83	0.	2.66	0.	8.22	0.	0.
L	0.	0.	0.	0.	0.	2.66	0.	8.14	0.	0.
R	0.	0.	0.	2.75	0.	0.	0.	1.25	0.	0.
110 A	0.	0.	0.	2.75	0.	4.66	0.	3.55	0.	0.
L	0.	0.	0.	0.	0.	4.66	0.	3.32	0.	0.
R	0.	0.	0.	2.35	0.	0.	0.	1.08	0.	0.
120 A	0.	0.	0.	2.35	0.	2.54	0.	2.52	0.	0.
L	0.	0.	0.	0.	0.	2.54	0.	2.28	0.	0.

RADIANCE VALUES ARE IN MICROWATTS. VA AND SA ARE IN DEGREES.

FIGURE 68 CONT.

IR RMS FLUCTUATION AS A FUNCTION OF SUN AZIMUTH

FILTER 5 AT 1055 AST INSOL ANGLE 42.9 DEG
SPECTRAL BAND 1.57 TO 2.98 MICRONS ELEVATION 28.9 KM

VA	0	10	20	30	40	50	60	70	80	90
SA										
R	0.	0.	0.	2.46	0.	0.	0.	1.27	0.	0.
130 A	0.	0.	0.	2.46	0.	13.36	0.	5.72	0.	0.
L	0.	0.	0.	0.	0.	13.36	0.	5.58	0.	0.
R	0.	0.	0.	2.12	0.	0.	0.	1.19	0.	0.
140 A	0.	0.	0.	2.12	0.	7.13	0.	7.92	0.	0.
L	0.	0.	0.	0.	0.	7.13	0.	7.83	0.	0.
R	0.	0.	0.	6.24	0.	0.	0.	1.14	0.	0.
150 A	0.	0.	0.	6.24	0.	0.	0.	1.14	0.	0.
L	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
R	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
160 A	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
L	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
R	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
170 A	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
L	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
R	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
180 A	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
L	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.

RADIANCE VALUES ARE IN MICROWATTS. VA AND SA ARE IN DEGREES.

FIGURE 68 CONT.

IR NUMBER OF OBSERVATIONS AS A FUNCTION OF SCATTERING ANGLE

FILTER 5 AT 1055 AST INSOL ANGLE 42.9 DEG
SPECTRAL BAND 1.57 TO 2.98 MICRONS ELEVATION 28.9 KM

SA	VA	0	10	20	30	40	50	60	70	80	90
0		0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
10		0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
20		0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
30		0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
40		0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
50		0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
60		0.	0.	0.	0.	0.	0.	0.	255.	0.	0.
70		0.	0.	0.	0.	0.	0.	0.	1255.	0.	0.
80		0.	0.	0.	0.	0.	0.	0.	674.	0.	0.
90		0.	0.	0.	0.	0.	750.	0.	539.	0.	0.
100		0.	0.	0.	0.	0.	450.	0.	555.	0.	0.
110		0.	0.	0.	447.	0.	360.	0.	435.	0.	0.
120		0.	0.	0.	614.	0.	315.	0.	629.	0.	0.
130		0.	0.	0.	465.	0.	300.	0.	509.	0.	0.
140		0.	0.	0.	480.	0.	225.	0.	224.	0.	0.
150		0.	0.	0.	449.	0.	150.	0.	0.	0.	0.
160		0.	0.	0.	164.	0.	0.	0.	0.	0.	0.
170		0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
180		0.	0.	0.	0.	0.	0.	0.	0.	0.	0.

RADIANCE VALUES ARE IN MICROWATTS. VA AND SA ARE IN DEGREES.

FIGURE 69

IR MEAN RADIANCE AS A FUNCTION OF SCATTERING ANGLE

FILTER 5 AT 1055 AST INSOL ANGLE 42.9 DEG
SPECTRAL BAND 1.57 TO 2.98 MICRONS ELEVATION 28.9 KM

VA	0	10	20	30	40	50	60	70	80	90
SA										
0	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
10	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
20	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
30	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
40	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
50	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
60	0.	0.	0.	0.	0.	0.	0.	43.14	0.	0.
70	0.	0.	0.	0.	0.	0.	0.	44.91	0.	0.
80	0.	0.	0.	0.	0.	0.	0.	46.32	0.	0.
90	0.	0.	0.	0.	0.	36.60	0.	43.59	0.	0.
100	0.	0.	0.	0.	0.	46.54	0.	48.83	0.	0.
110	0.	0.	0.	35.44	0.	50.19	0.	40.29	0.	0.
120	0.	0.	0.	31.22	0.	46.93	0.	35.30	0.	0.
130	0.	0.	0.	32.61	0.	46.03	0.	38.16	0.	0.
140	0.	0.	0.	48.34	0.	48.50	0.	38.11	0.	0.
150	0.	0.	0.	47.03	0.	34.26	0.	0.	0.	0.
160	0.	0.	0.	28.38	0.	0.	0.	0.	0.	0.
170	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
180	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.

RADIANCE VALUES ARE IN MICROWATTS. VA AND SA ARE IN DEGREES.

FIGURE 70

IR RMS FLUCTUATION AS A FUNCTION OF SCATTERING ANGLE

FILTER 5 AT 1055 AST INSOL ANGLE 42.9 DEG
SPECTRAL BAND 1.57 TO 2.98 MICRONS ELEVATION 28.9 KM

SA	VA	0	10	20	30	40	50	60	70	80	90
0	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
10	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
20	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
30	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
40	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
50	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
60	0.	0.	0.	0.	0.	0.	0.	0.	1.29	0.	0.
70	0.	0.	0.	0.	0.	0.	0.	0.	2.74	0.	0.
80	0.	0.	0.	0.	0.	0.	0.	0.	3.13	0.	0.
90	0.	0.	0.	0.	0.	0.	13.80	0.	3.16	0.	0.
100	0.	0.	0.	0.	0.	0.	3.39	0.	2.99	0.	0.
110	0.	0.	0.	11.81	0.	2.39	0.	7.72	0.	0.	0.
120	0.	0.	0.	7.44	0.	4.24	0.	7.13	0.	0.	0.
130	0.	0.	0.	13.60	0.	4.49	0.	6.22	0.	0.	0.
140	0.	0.	0.	3.37	0.	2.37	0.	6.87	0.	0.	0.
150	0.	0.	0.	3.33	0.	13.10	0.	0.	0.	0.	0.
160	0.	0.	0.	5.15	0.	0.	0.	0.	0.	0.	0.
170	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
180	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.

RADIANCE VALUES ARE IN MICROWATTS. VA AND SA ARE IN DEGREES.

FIGURE 71

IR NUMBER OF OBSERVATIONS AS A FUNCTION OF SUN AZINUTH

FILTER 4 AT 1059 AST INSOL ANGLE 42.8 DEG
SPECTRAL BAND 2.76 TO 3.25 MICRONS ELEVATION 29.8 KM

VA	0	10	20	30	40	50	60	70	80	90
SA										
R	0.	0.	0.	0.	0.	0.	0.	105.	0.	0.
0 A	0.	0.	0.	30.	0.	0.	30.	105.	0.	0.
L	0.	0.	0.	60.	0.	0.	60.	105.	0.	0.
R	0.	0.	0.	0.	150.	0.	0.	195.	0.	0.
10 A	0.	0.	0.	98.	75.	0.	102.	187.	0.	0.
L	0.	0.	0.	195.	0.	0.	203.	179.	0.	0.
R	0.	0.	0.	0.	90.	0.	0.	165.	0.	0.
20 A	0.	0.	0.	113.	45.	0.	98.	157.	0.	0.
L	0.	0.	0.	225.	0.	0.	195.	149.	0.	0.
R	0.	0.	0.	0.	135.	0.	0.	135.	0.	0.
30 A	0.	0.	0.	105.	68.	0.	97.	150.	0.	0.
L	0.	0.	0.	210.	0.	0.	193.	165.	0.	0.
R	0.	0.	0.	0.	120.	0.	0.	165.	0.	0.
40 A	0.	0.	0.	68.	60.	0.	97.	158.	0.	0.
L	0.	0.	0.	135.	0.	0.	194.	150.	0.	0.
R	0.	0.	0.	0.	105.	0.	0.	75.	0.	0.
50 A	0.	0.	0.	113.	53.	0.	74.	128.	0.	0.
L	0.	0.	0.	225.	0.	0.	147.	180.	0.	0.
R	0.	0.	0.	0.	75.	0.	0.	195.	0.	0.
60 A	0.	0.	0.	90.	38.	0.	82.	195.	0.	0.
L	0.	0.	0.	180.	0.	0.	164.	195.	0.	0.

RADIANCE VALUES ARE IN MICROWATTS. VA AND SA ARE IN DEGREES.

FIGURE 72

IR NUMBER OF OBSERVATIONS AS A FUNCTION OF SUN AZIMUTH

FILTER 4 AT 1059 AST INSOL ANGLE 42.8 DEG
SPECTRAL BAND 2.76 TO 3.25 MICRONS ELEVATION 29.8 KM

VA	0	10	20	30	40	50	60	70	80	90
SA										
R	0.	0.	0.	0.	0.	0.	0.	209.	0.	0.
70 A	0.	0.	0.	105.	0.	0.	83.	217.	0.	0.
L	0.	0.	0.	210.	0.	0.	165.	224.	0.	0.
R	0.	0.	0.	0.	150.	0.	0.	210.	0.	0.
80 A	0.	0.	0.	68.	75.	0.	90.	203.	0.	0.
L	0.	0.	0.	135.	0.	0.	180.	195.	0.	0.
R	0.	0.	0.	0.	104.	0.	0.	180.	0.	0.
90 A	0.	0.	0.	90.	52.	0.	104.	180.	0.	0.
L	0.	0.	0.	180.	0.	0.	208.	180.	0.	0.
R	0.	0.	0.	0.	105.	0.	0.	180.	0.	0.
100 A	0.	0.	0.	98.	53.	0.	60.	188.	0.	0.
L	0.	0.	0.	195.	0.	0.	120.	195.	0.	0.
R	0.	0.	0.	0.	195.	0.	0.	90.	0.	0.
110 A	0.	0.	0.	90.	98.	0.	89.	135.	0.	0.
L	0.	0.	0.	180.	0.	0.	178.	180.	0.	0.
R	0.	0.	0.	0.	240.	0.	0.	149.	0.	0.
120 A	0.	0.	0.	59.	120.	0.	90.	172.	0.	0.
L	0.	0.	0.	117.	0.	0.	180.	195.	0.	0.

RADIANCE VALUES ARE IN MICROWATTS. VA AND SA ARE IN DEGREES.

FIGURE 72 CONT.

IR NUMBER OF OBSERVATIONS AS A FUNCTION OF SUN AZIMUTH

FILTER 4 AT 1059 AST INSOL ANGLE 42.8 DEG
SPECTRAL BAND 2.76 TO 3.25 MICRONS ELEVATION 29.8 KM

	VA	0	10	20	30	40	50	60	70	80	90
SA											
R		0.	0.	0.	0.	180.	0.	0.	135.	0.	0.
130 A		0.	0.	0.	68.	90.	0.	98.	128.	0.	0.
L		0.	0.	0.	135.	0.	0.	195.	120.	0.	0.
R		0.	0.	0.	0.	180.	0.	9.	209.	0.	0.
140 A		0.	0.	0.	30.	90.	0.	60.	157.	0.	0.
L		0.	0.	0.	60.	0.	0.	120.	105.	0.	0.
R		0.	0.	0.	0.	135.	0.	0.	60.	0.	0.
150 A		0.	0.	0.	0.	68.	0.	0.	30.	0.	0.
L		0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
R		0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
160 A		0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
L		0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
R		0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
170 A		0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
L		0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
R		0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
180 A		0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
L		0.	0.	0.	0.	0.	0.	0.	0.	0.	0.

RADIANCE VALUES ARE IN MICROWATTS. VA AND SA ARE IN DEGREES.

FIGURE 72 CONT.

IR MEAN RADIANCE AS A FUNCTION OF SUN AZIMUTH

FILTER 4 AT 1059 AST INSOL ANGLE 42.8 DEG
SPECTRAL BAND 2.76 TO 3.25 MICRONS ELEVATION 29.8 KM

VA	0	10	20	30	40	50	60	70	80	90
SA										
R	0.	0.	0.	0.	0.	0.	0.	1.36	0.	0.
0 A	0.	0.	0.	1.19	0.	0.	3.45	1.45	0.	0.
L	0.	0.	0.	1.19	0.	0.	3.45	1.54	0.	0.
R	0.	0.	0.	0.	1.42	0.	0.	1.68	0.	0.
10 A	0.	0.	0.	0.89	1.42	0.	3.24	1.45	0.	0.
L	0.	0.	0.	0.89	0.	0.	3.24	1.21	0.	0.
R	0.	0.	0.	0.	1.63	0.	0.	2.68	0.	0.
20 A	0.	0.	0.	2.24	1.63	0.	3.69	1.77	0.	0.
L	0.	0.	0.	2.24	0.	0.	3.69	0.75	0.	0.
R	0.	0.	0.	0.	0.88	0.	0.	2.86	0.	0.
30 A	0.	0.	0.	0.70	0.88	0.	3.84	1.56	0.	0.
L	0.	0.	0.	0.70	0.	0.	3.84	0.49	0.	0.
R	0.	0.	0.	0.	0.96	0.	0.	2.68	0.	0.
40 A	0.	0.	0.	1.56	0.96	0.	3.67	1.58	0.	0.
L	0.	0.	0.	1.56	0.	0.	3.67	0.37	0.	0.
R	0.	0.	0.	0.	0.90	0.	0.	2.62	0.	0.
50 A	0.	0.	0.	1.66	0.90	0.	2.28	1.06	0.	0.
L	0.	0.	0.	1.66	0.	0.	2.28	0.40	0.	0.
R	0.	0.	0.	0.	0.69	0.	0.	2.83	0.	0.
60 A	0.	0.	0.	0.70	0.69	0.	2.51	1.59	0.	0.
L	0.	0.	0.	0.70	0.	0.	2.51	0.36	0.	0.

RADIANCE VALUES ARE IN MICROWATTS. VA AND SA ARE IN DEGREES.

FIGURE 73

IR MEAN RADIANCE AS A FUNCTION OF SUN AZIMUTH

FILTER 4 AT 1059 AST INSOL ANGLE 42.8 DEG
SPECTRAL BAND 2.76 TO 3.25 MICRONS ELEVATION 29.8 KM

VA	0	10	20	30	40	50	60	70	80	90
SA										
R	0.	0.	0.	0.	0.	0.	0.	2.58	0.	0.
70 A	0.	0.	0.	0.68	0.	0.	2.76	1.49	0.	0.
L	0.	0.	0.	0.68	0.	0.	2.76	0.47	0.	0.
R	0.	0.	0.	0.	0.84	0.	0.	2.80	0.	0.
80 A	0.	0.	0.	1.23	0.84	0.	2.09	1.92	0.	0.
L	0.	0.	0.	1.23	0.	0.	2.09	0.98	0.	0.
R	0.	0.	0.	0.	0.51	0.	0.	2.88	0.	0.
90 A	0.	0.	0.	1.42	0.51	0.	1.56	2.10	0.	0.
L	0.	0.	0.	1.42	0.	0.	1.56	1.31	0.	0.
R	0.	0.	0.	0.	0.75	0.	0.	2.46	0.	0.
100 A	0.	0.	0.	0.57	0.75	0.	0.94	1.93	0.	0.
L	0.	0.	0.	0.57	0.	0.	0.94	1.44	0.	0.
R	0.	0.	0.	0.	1.21	0.	0.	2.64	0.	0.
110 A	0.	0.	0.	0.58	1.21	0.	0.60	1.69	0.	0.
L	0.	0.	0.	0.58	0.	0.	0.60	1.21	0.	0.
R	0.	0.	0.	0.	1.40	0.	0.	3.26	0.	0.
120 A	0.	0.	0.	1.27	1.40	0.	0.49	2.26	0.	0.
L	0.	0.	0.	1.27	0.	0.	0.49	1.48	0.	0.

RADIANCE VALUES ARE IN MICROWATTS. VA AND SA ARE IN DEGREES.

FIGURE 73 CONT.

IR MEAN RADIANCE AS A FUNCTION OF SUN AZIMUTH

FILTER 4 AT 1059 AST INSOL ANGLE 42.8 DEG
SPECTRAL BAND 2.76 TO 3.25 MICRONS ELEVATION 29.8 KM

VA	0	10	20	30	40	50	60	70	80	90
SA										
R	0.	0.	0.	0.	0.98	0.	0.	2.19	0.	0.
130 A	0.	0.	0.	1.49	0.98	0.	0.55	2.09	0.	0.
L	0.	0.	0.	1.49	0.	0.	0.55	1.97	0.	0.
R	0.	0.	0.	0.	0.64	0.	0.	2.39	0.	0.
140 A	0.	0.	0.	1.27	0.64	0.	0.63	2.48	0.	0.
L	0.	0.	0.	1.27	0.	0.	0.63	2.67	0.	0.
R	0.	0.	0.	0.	0.59	0.	0.	3.44	0.	0.
150 A	0.	0.	0.	0.	0.59	0.	0.	3.44	0.	0.
L	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
R	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
160 A	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
L	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
R	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
170 A	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
L	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
R	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
180 A	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
L	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.

RADIANCE VALUES ARE IN MICROWATTS. VA AND SA ARE IN DEGREES.

IR RMS FLUCTUATION AS A FUNCTION OF SUN AZIMUTH

FILTER 4 AT 1059 AST INSOL ANGLE 42.8 DEG
SPECTRAL BAND 2.76 TO 3.25 MICRONS ELEVATION 29.8 KM

VA	0	10	20	30	40	50	60	70	80	90
SA										
R	0.	0.	0.	0.	0.	0.	0.	0.21	0.	0.
0 A	0.	0.	0.	0.32	0.	0.	0.82	0.37	0.	0.
L	0.	0.	0.	0.32	0.	0.	0.82	0.31	0.	0.
R	0.	0.	0.	0.	0.37	0.	0.	0.49	0.	0.
10 A	0.	0.	0.	0.51	0.37	0.	0.99	0.59	0.	0.
L	0.	0.	0.	0.51	0.	0.	0.99	0.33	0.	0.
R	0.	0.	0.	0.	0.39	0.	0.	0.28	0.	0.
20 A	0.	0.	0.	0.39	0.39	0.	0.75	0.38	0.	0.
L	0.	0.	0.	0.39	0.	0.	0.75	0.25	0.	0.
R	0.	0.	0.	0.	0.36	0.	0.	0.33	0.	0.
30 A	0.	0.	0.	0.52	0.36	0.	0.68	0.40	0.	0.
L	0.	0.	0.	0.52	0.	0.	0.68	0.22	0.	0.
R	0.	0.	0.	0.	0.77	0.	0.	0.26	0.	0.
40 A	0.	0.	0.	0.97	0.77	0.	0.78	0.33	0.	0.
L	0.	0.	0.	0.97	0.	0.	0.78	0.21	0.	0.
R	0.	0.	0.	0.	0.55	0.	0.	0.31	0.	0.
50 A	0.	0.	0.	0.63	0.55	0.	0.50	0.39	0.	0.
L	0.	0.	0.	0.63	0.	0.	0.50	0.23	0.	0.
R	0.	0.	0.	0.	0.29	0.	0.	0.29	0.	0.
60 A	0.	0.	0.	0.32	0.29	0.	0.64	0.36	0.	0.
L	0.	0.	0.	0.32	0.	0.	0.64	0.22	0.	0.

RADIANCE VALUES ARE IN MICROWATTS. VA AND SA ARE IN DEGREES.

FIGURE 74

IR RMS FLUCTUATION AS A FUNCTION OF SUN AZIMUTH

FILTER 4 AT 1059 AST INSOL ANGLE 42.8 DEG
SPECTRAL BAND 2.76 TO 3.25 MICRONS ELEVATION 29.8 KM

VA	0	10	20	30	40	50	60	70	80	90
SA										
R	0.	0.	0.	0.	0.	0.	0.	0.29	0.	0.
70 A	0.	0.	0.	0.25	0.	0.	0.50	0.38	0.	0.
L	0.	0.	0.	0.25	0.	0.	0.50	0.25	0.	0.
R	0.	0.	0.	0.	0.49	0.	0.	0.29	0.	0.
80 A	0.	0.	0.	0.28	0.49	0.	0.74	0.42	0.	0.
L	0.	0.	0.	0.28	0.	0.	0.74	0.30	0.	0.
R	0.	0.	0.	0.	0.26	0.	0.	0.30	0.	0.
90 A	0.	0.	0.	0.29	0.26	0.	0.57	0.40	0.	0.
L	0.	0.	0.	0.29	0.	0.	0.57	0.27	0.	0.
R	0.	0.	0.	0.	0.32	0.	0.	0.41	0.	0.
100 A	0.	0.	0.	0.28	0.32	0.	0.27	0.49	0.	0.
L	0.	0.	0.	0.28	0.	0.	0.27	0.28	0.	0.
R	0.	0.	0.	0.	0.37	0.	0.	0.25	0.	0.
110 A	0.	0.	0.	0.23	0.37	0.	0.22	0.35	0.	0.
L	0.	0.	0.	0.23	0.	0.	0.22	0.24	0.	0.
R	0.	0.	0.	0.	0.33	0.	0.	0.34	0.	0.
120 A	0.	0.	0.	0.34	0.33	0.	0.23	0.44	0.	0.
L	0.	0.	0.	0.34	0.	0.	0.23	0.27	0.	0.

RADIANCE VALUES ARE IN MICROWATTS. VA AND SA ARE IN DEGREES.

FIGURE 74 CONT.

IR RMS FLUCTUATION AS A FUNCTION OF SUN AZIMUTH

FILTER 4 AT 1059 AST INSOL ANGLE 42.8 DEG
SPECTRAL BAND 2.76 TO 3.25 MICRONS ELEVATION 29.8 KM

	VA	0	10	20	30	40	50	60	70	80	90
SA											
	R	0.	0.	0.	0.	0.34	0.	0.	0.49	0.	0.
130	A	0.	0.	0.	0.23	0.34	0.	0.24	0.65	0.	0.
	L	0.	0.	0.	0.23	0.	0.	0.24	0.43	0.	0.
	R	0.	0.	0.	0.	0.25	0.	0.	0.53	0.	0.
140	A	0.	0.	0.	0.26	0.25	0.	0.23	0.59	0.	0.
	L	0.	0.	0.	0.26	0.	0.	0.23	0.25	0.	0.
	R	0.	0.	0.	0.	0.30	0.	0.	0.24	0.	0.
150	A	0.	0.	0.	0.	0.30	0.	0.	0.24	0.	0.
	L	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
	R	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
160	A	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
	L	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
	R	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
170	A	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
	L	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
	R	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
180	A	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
	L	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.

RADIANCE VALUES ARE IN MICROWATTS. VA AND SA ARE IN DEGREES.

FIGURE 74 CONT.

IR NUMBER OF OBSERVATIONS AS A FUNCTION OF SCATTERING ANGLE

FILTER 4 AT 1059 AST INSOL ANGLE 42.8 DEG
SPECTRAL BAND 2.76 TO 3.25 MICRONS ELEVATION 29.8 KM

VA	0	10	20	30	40	50	60	70	80	90
SA										
0	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
10	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
20	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
30	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
40	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
50	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
60	0.	0.	0.	0.	0.	0.	0.	30.	0.	0.
70	0.	0.	0.	0.	0.	0.	0.	1363.	0.	0.
80	0.	0.	0.	0.	0.	0.	695.	615.	0.	0.
90	0.	0.	0.	0.	150.	0.	401.	688.	0.	0.
100	0.	0.	0.	0.	435.	0.	255.	570.	0.	0.
110	0.	0.	0.	960.	120.	0.	343.	510.	0.	0.
120	0.	0.	0.	525.	224.	0.	208.	434.	0.	0.
130	0.	0.	0.	435.	240.	0.	270.	450.	0.	0.
140	0.	0.	0.	312.	345.	0.	285.	314.	0.	0.
150	0.	0.	0.	195.	285.	0.	45.	0.	0.	0.
160	0.	0.	0.	15.	165.	0.	0.	0.	0.	0.
170	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
180	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.

RADIANCE VALUES ARE IN MICROWATTS. VA AND SA ARE IN DEGREES.

FIGURE 75

IR MEAN RADIANCE AS A FUNCTION OF SCATTERING ANGLE

FILTER 4 AT 1059 AST INSOL ANGLE 42.8 DEG
SPECTRAL BAND 2.76 TO 3.25 MICRONS ELEVATION 29.8 KM

VA	0	10	20	30	40	50	60	70	80	90
SA										
0	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
10	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
20	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
30	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
40	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
50	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
60	0.	0.	0.	0.	0.	0.	0.	1.44	0.	0.
70	0.	0.	0.	0.	0.	0.	0.	1.55	0.	0.
80	0.	0.	0.	0.	0.	0.	3.54	1.33	0.	0.
90	0.	0.	0.	0.	1.44	0.	2.84	1.60	0.	0.
100	0.	0.	0.	0.	1.08	0.	2.91	2.05	0.	0.
110	0.	0.	0.	1.43	0.89	0.	1.70	1.92	0.	0.
120	0.	0.	0.	0.81	0.57	0.	0.83	1.90	0.	0.
130	0.	0.	0.	1.09	0.99	0.	0.54	2.24	0.	0.
140	0.	0.	0.	0.79	1.36	0.	0.58	2.75	0.	0.
150	0.	0.	0.	1.42	0.73	0.	0.51	0.	0.	0.
160	0.	0.	0.	1.37	0.63	0.	0.	0.	0.	0.
170	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
180	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.

RADIANCE VALUES ARE IN MICROWATTS. VA AND SA ARE IN DEGREES.

FIGURE 76

IR RMS FLUCTUATION AS A FUNCTION OF SCATTERING ANGLE

FILTER 4 AT 1059 ÅST INSOL ANGLE 42.8 DEG
SPECTRAL BAND 2.76 TO 3.25 MICRONS ELEVATION 29.8 KM

VA	0	10	20	30	40	50	60	70	80	90
SA										
0	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
10	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
20	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
30	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
40	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
50	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
60	0.	0.	0.	0.	0.	0.	0.	0.35	0.	0.
70	0.	0.	0.	0.	0.	0.	0.	0.91	0.	0.
80	0.	0.	0.	0.	0.	0.	0.84	1.16	0.	0.
90	0.	0.	0.	0.	0.37	0.	1.00	1.14	0.	0.
100	0.	0.	0.	0.	0.61	0.	0.50	0.88	0.	0.
110	0.	0.	0.	0.84	0.55	0.	0.53	0.67	0.	0.
120	0.	0.	0.	0.35	0.26	0.	0.28	0.87	0.	0.
130	0.	0.	0.	0.47	0.43	0.	0.23	0.63	0.	0.
140	0.	0.	0.	0.44	0.32	0.	0.25	0.51	0.	0.
150	0.	0.	0.	0.26	0.30	0.	0.19	0.	0.	0.
160	0.	0.	0.	0.25	0.30	0.	0.	0.	0.	0.
170	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
180	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.

RADIANCE VALUES ARE IN MICROWATTS. VA AND SA ARE IN DEGREES.

FIGURE 77

IR NUMBER OF OBSERVATIONS AS A FUNCTION OF SUN AZIMUTH

FILTER 3 AT 1105 AST INSOL ANGLE 42.6 DEG
SPECTRAL BAND 2.37 TO 2.80 MICRONS ELEVATION 30.5 KM

VA SA	0	10	20	30	40	50	60	70	80	90
R	0.	0.	0.	0.	0.	0.	0.	30.	0.	0.
0 A	0.	0.	0.	15.	0.	0.	0.	67.	0.	0.
L	0.	0.	0.	30.	0.	0.	0.	104.	0.	0.
R	0.	0.	0.	0.	162.	0.	0.	165.	0.	0.
10 A	0.	0.	0.	83.	81.	0.	0.	150.	0.	0.
L	0.	0.	0.	165.	0.	0.	0.	134.	0.	0.
R	0.	0.	0.	0.	180.	0.	0.	103.	0.	0.
20 A	0.	0.	0.	97.	90.	0.	0.	136.	0.	0.
L	0.	0.	0.	193.	0.	0.	0.	168.	0.	0.
R	0.	0.	0.	0.	179.	0.	0.	105.	0.	0.
30 A	0.	0.	0.	98.	90.	0.	0.	156.	0.	0.
L	0.	0.	0.	195.	0.	0.	0.	206.	0.	0.
R	0.	0.	0.	0.	208.	0.	0.	149.	0.	0.
40 A	0.	0.	0.	104.	104.	0.	0.	181.	0.	0.
L	0.	0.	0.	208.	0.	0.	0.	213.	0.	0.
R	0.	0.	0.	0.	165.	0.	0.	150.	0.	0.
50 A	0.	0.	0.	83.	83.	0.	0.	161.	0.	0.
L	0.	0.	0.	165.	0.	0.	0.	172.	0.	0.
R	0.	0.	0.	0.	208.	0.	0.	90.	0.	0.
60 A	0.	0.	0.	60.	104.	0.	0.	146.	0.	0.
L	0.	0.	0.	120.	0.	0.	0.	201.	0.	0.

RADIANCE VALUES ARE IN MICROWATTS. VA AND SA ARE IN DEGREES.

FIGURE 78

IR NUMBER OF OBSERVATIONS AS A FUNCTION OF SUN AZIMUTH

FILTER 3 AT 1105 AST INSOL ANGLE 42.6 DEG
SPECTRAL BAND 2.37 TO 2.80 MICRONS ELEVATION 30.5 KM

VA	0	10	20	30	40	50	60	70	80	90
SA										
R	0.	0.	0.	0.	208.	0.	0.	83.	0.	0.
70 A	0.	0.	0.	111.	104.	0.	0.	139.	0.	0.
L	0.	0.	0.	222.	0.	0.	0.	195.	0.	0.
R	0.	0.	0.	0.	195.	0.	0.	105.	0.	0.
80 A	0.	0.	0.	90.	98.	0.	0.	157.	0.	0.
L	0.	0.	0.	180.	0.	0.	0.	208.	0.	0.
R	0.	0.	0.	0.	198.	0.	0.	144.	0.	0.
90 A	0.	0.	0.	105.	99.	0.	0.	170.	0.	0.
L	0.	0.	0.	210.	0.	0.	0.	195.	0.	0.
R	0.	0.	0.	0.	204.	0.	0.	170.	0.	0.
100 A	0.	0.	0.	104.	102.	0.	0.	174.	0.	0.
L	0.	0.	0.	208.	0.	0.	0.	178.	0.	0.
R	0.	0.	0.	0.	210.	0.	0.	177.	0.	0.
110 A	0.	0.	0.	100.	105.	0.	0.	185.	0.	0.
L	0.	0.	0.	199.	0.	0.	0.	193.	0.	0.
R	0.	0.	0.	0.	174.	0.	0.	164.	0.	0.
120 A	0.	0.	0.	92.	87.	0.	0.	165.	0.	0.
L	0.	0.	0.	183.	0.	0.	0.	165.	0.	0.

RADIANCE VALUES ARE IN MICROWATTS. VA AND SA ARE IN DEGREES.

FIGURE 78 CONT.

IR NUMBER OF OBSERVATIONS AS A FUNCTION OF SUN AZINUTH

FILTER 3 AT 1105 AST INSOL ANGLE 42.6 DEG
SPECTRAL BAND 2.37 TO 2.80 MICRONS ELEVATION 30.5 KM

VA SA	0	10	20	30	40	50	60	70	80	90
R	0.	0.	0.	0.	185.	0.	0.	165.	0.	0.
130 A	0.	0.	0.	96.	93.	0.	0.	188.	0.	0.
L	0.	0.	0.	192.	0.	0.	0.	210.	0.	0.
R	0.	0.	0.	0.	189.	0.	0.	135.	0.	0.
140 A	0.	0.	0.	105.	95.	0.	0.	149.	0.	0.
L	0.	0.	0.	210.	0.	0.	0.	163.	0.	0.
R	0.	0.	0.	0.	30.	0.	0.	105.	0.	0.
150 A	0.	0.	0.	0.	15.	0.	0.	53.	0.	0.
L	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
R	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
160 A	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
L	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
R	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
170 A	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
L	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
R	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
180 A	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
L	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.

RADIANCE VALUES ARE IN MICROWATTS. VA AND SA ARE IN DEGREES.

FIGURE 78 CONT.

IR MEAN RADIANCE AS A FUNCTION OF SUN AZIMUTH

FILTER 3 AT 1105 AST INSOL ANGLE 42.6 DEG
SPECTRAL BAND 2.37 TO 2.80 MICRONS ELEVATION 30.5 KM

VA	0	10	20	30	40	50	60	70	80	90
SA										
R	0.	0.	0.	0.	0.	0.	0.	27.01	0.	0.
0 A	0.	0.	0.	6.75	0.	0.	0.	14.57	0.	0.
L	0.	0.	0.	6.75	0.	0.	0.	10.98	0.	0.
R	0.	0.	0.	0.	11.33	0.	0.	24.10	0.	0.
10 A	0.	0.	0.	4.88	11.33	0.	0.	23.01	0.	0.
L	0.	0.	0.	4.88	0.	0.	0.	21.67	0.	0.
R	0.	0.	0.	0.	5.09	0.	0.	24.67	0.	0.
20 A	0.	0.	0.	9.33	5.09	0.	0.	17.38	0.	0.
L	0.	0.	0.	9.33	0.	0.	0.	12.91	0.	0.
R	0.	0.	0.	0.	5.31	0.	0.	23.93	0.	0.
30 A	0.	0.	0.	1.76	5.31	0.	0.	20.33	0.	0.
L	0.	0.	0.	1.76	0.	0.	0.	18.50	0.	0.
R	0.	0.	0.	0.	24.93	0.	0.	22.21	0.	0.
40 A	0.	0.	0.	15.66	24.93	0.	0.	20.65	0.	0.
L	0.	0.	0.	15.66	0.	0.	0.	19.56	0.	0.
R	0.	0.	0.	0.	4.17	0.	0.	26.69	0.	0.
50 A	0.	0.	0.	2.69	4.17	0.	0.	19.41	0.	0.
L	0.	0.	0.	2.69	0.	0.	0.	13.07	0.	0.
R	0.	0.	0.	0.	11.70	0.	0.	25.69	0.	0.
60 A	0.	0.	0.	3.08	11.70	0.	0.	17.06	0.	0.
L	0.	0.	0.	3.08	0.	0.	0.	13.20	0.	0.

RADIANCE VALUES ARE IN MICROWATTS. VA AND SA ARE IN DEGREES.

FIGURE 79

IR MEAN RADIANCE AS A FUNCTION OF SUN AZIMUTH

FILTER 3 AT 1105 AST INSOL ANGLE 42.6 DEG
SPECTRAL BAND 2.37 TO 2.80 MICRONS ELEVATION 30.5 KM

VA	0	10	20	30	40	50	60	70	80	90
SA										
R	0.	0.	0.	0.	6.98	0.	0.	19.29	0.	0.
70 A	0.	0.	0.	7.32	6.98	0.	0.	13.06	0.	0.
L	0.	0.	0.	7.32	0.	0.	0.	10.41	0.	0.
R	0.	0.	0.	0.	2.34	0.	0.	30.39	0.	0.
80 A	0.	0.	0.	28.25	2.34	0.	0.	16.28	0.	0.
L	0.	0.	0.	28.25	0.	0.	0.	9.15	0.	0.
R	0.	0.	0.	0.	6.35	0.	0.	22.41	0.	0.
90 A	0.	0.	0.	23.31	6.35	0.	0.	13.86	0.	0.
L	0.	0.	0.	23.31	0.	0.	0.	7.55	0.	0.
R	0.	0.	0.	0.	4.82	0.	0.	13.27	0.	0.
100 A	0.	0.	0.	11.04	4.82	0.	0.	11.55	0.	0.
L	0.	0.	0.	11.04	0.	0.	0.	9.90	0.	0.
R	0.	0.	0.	0.	1.79	0.	0.	17.88	0.	0.
110 A	0.	0.	0.	13.42	1.79	0.	0.	10.22	0.	0.
L	0.	0.	0.	13.42	0.	0.	0.	3.18	0.	0.
R	0.	0.	0.	0.	11.51	0.	0.	27.33	0.	0.
120 A	0.	0.	0.	14.75	11.51	0.	0.	14.19	0.	0.
L	0.	0.	0.	14.75	0.	0.	0.	1.14	0.	0.

RADIANCE VALUES ARE IN MICROWATTS. VA AND SA ARE IN DEGREES.

FIGURE 79 CONT.

IR MEAN RADIANCE AS A FUNCTION OF SUN AZIMUTH

FILTER 3 AT 1105 AST INSOL ANGLE 42.6 DEG
SPECTRAL BAND 2.37 TO 2.80 MICRONS ELEVATION 30.5 KM

VA	0	10	20	30	40	50	60	70	80	90
SA										
R	0.	0.	0.	0.	13.97	0.	0.	39.27	0.	0.
130 A	0.	0.	0.	15.69	13.97	0.	0.	18.25	0.	0.
L	0.	0.	0.	15.69	0.	0.	0.	1.73	0.	0.
R	0.	0.	0.	0.	13.89	0.	0.	39.80	0.	0.
140 A	0.	0.	0.	6.95	13.89	0.	0.	21.05	0.	0.
L	0.	0.	0.	6.95	0.	0.	0.	5.51	0.	0.
R	0.	0.	0.	0.	9.02	0.	0.	41.68	0.	0.
150 A	0.	0.	0.	0.	9.02	0.	0.	41.68	0.	0.
L	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
R	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
160 A	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
L	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
R	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
170 A	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
L	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
R	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
180 A	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
L	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.

RADIANCE VALUES ARE IN MICROWATTS. VA AND SA ARE IN DEGREES.

FIGURE 79 CONT.

IR RMS FLUCTUATION AS A FUNCTION OF SUN AZIMUTH

FILTER 3 AT 1105 AST						INSOL ANGLE 42.6 DEG				
SPECTRAL BAND 2.37 TO 2.80 MICRONS						ELEVATION 30.5 KM				
VA	0	10	20	30	40	50	60	70	80	90
SA										
R	0.	0.	0.	0.	0.	0.	0.	1.54	0.	0.
0 A	0.	0.	0.	0.46	0.	0.	0.	2.19	0.	0.
L	0.	0.	0.	0.46	0.	0.	0.	1.56	0.	0.
R	0.	0.	0.	0.	3.94	0.	0.	4.33	0.	0.
10 A	0.	0.	0.	2.24	3.94	0.	0.	5.60	0.	0.
L	0.	0.	0.	2.24	0.	0.	0.	3.55	0.	0.
R	0.	0.	0.	0.	1.28	0.	0.	2.86	0.	0.
20 A	0.	0.	0.	3.89	1.28	0.	0.	5.34	0.	0.
L	0.	0.	0.	3.89	0.	0.	0.	4.51	0.	0.
R	0.	0.	0.	0.	3.14	0.	0.	3.50	0.	0.
30 A	0.	0.	0.	0.80	3.14	0.	0.	4.57	0.	0.
L	0.	0.	0.	0.80	0.	0.	0.	2.93	0.	0.
R	0.	0.	0.	0.	10.44	0.	0.	2.90	0.	0.
40 A	0.	0.	0.	12.18	10.44	0.	0.	5.42	0.	0.
L	0.	0.	0.	12.18	0.	0.	0.	4.58	0.	0.
R	0.	0.	0.	0.	3.79	0.	0.	5.09	0.	0.
50 A	0.	0.	0.	0.50	3.79	0.	0.	5.30	0.	0.
L	0.	0.	0.	0.50	0.	0.	0.	1.48	0.	0.
R	0.	0.	0.	0.	12.02	0.	0.	3.92	0.	0.
60 A	0.	0.	0.	0.43	12.02	0.	0.	4.29	0.	0.
L	0.	0.	0.	0.43	0.	0.	0.	1.74	0.	0.

RADIANCE VALUES ARE IN MICROWATTS. VA AND SA ARE IN DEGREES.

FIGURE 80

IR RMS FLUCTUATION AS A FUNCTION OF SUN AZIMUTH

FILTER 3 AT 1105 AST INSOL ANGLE 42.6 DEG
SPECTRAL BAND 2.37 TO 2.80 MICRONS ELEVATION 30.5 KM

VA	0	10	20	30	40	50	60	70	80	90
SA										
R	0.	0.	0.	0.	6.31	0.	0.	5.31	0.	0.
70 A	0.	0.	0.	6.49	6.31	0.	0.	5.50	0.	0.
L	0.	0.	0.	6.49	0.	0.	0.	1.43	0.	0.
R	0.	0.	0.	0.	1.23	0.	0.	1.22	0.	0.
80 A	0.	0.	0.	3.86	1.23	0.	0.	3.33	0.	0.
L	0.	0.	0.	3.86	0.	0.	0.	3.10	0.	0.
R	0.	0.	0.	0.	5.06	0.	0.	3.25	0.	0.
90 A	0.	0.	0.	5.35	5.06	0.	0.	3.95	0.	0.
L	0.	0.	0.	5.35	0.	0.	0.	2.25	0.	0.
R	0.	0.	0.	0.	4.30	0.	0.	3.14	0.	0.
100 A	0.	0.	0.	1.60	4.30	0.	0.	3.76	0.	0.
L	0.	0.	0.	1.60	0.	0.	0.	2.07	0.	0.
R	0.	0.	0.	0.	0.80	0.	0.	5.24	0.	0.
110 A	0.	0.	0.	2.39	0.80	0.	0.	6.74	0.	0.
L	0.	0.	0.	2.39	0.	0.	0.	4.23	0.	0.
R	0.	0.	0.	0.	4.61	0.	0.	11.44	0.	0.
120 A	0.	0.	0.	3.16	4.61	0.	0.	11.48	0.	0.
L	0.	0.	0.	3.16	0.	0.	0.	0.93	0.	0.

RADIANCE VALUES ARE IN MICROWATTS. VA AND SA ARE IN DEGREES.

FIGURE 80 CONT.

IR RMS FLUCTUATION AS A FUNCTION OF SUN AZIMUTH

FILTER 3 AT 1105 AST						INSOL ANGLE 42.6 DEG				
SPECTRAL BAND 2.37 TO 2.80 MICRONS						ELEVATION 30.5 KM				
VA	0	10	20	30	40	50	60	70	80	90
SA										
R	0.	0.	0.	0.	7.62	0.	0.	1.26	0.	0.
130 A	0.	0.	0.	2.82	7.62	0.	0.	1.57	0.	0.
L	0.	0.	0.	2.82	0.	0.	0.	0.94	0.	0.
R	0.	0.	0.	0.	8.05	0.	0.	1.90	0.	0.
140 A	0.	0.	0.	1.49	8.05	0.	0.	3.62	0.	0.
L	0.	0.	0.	1.49	0.	0.	0.	3.08	0.	0.
R	0.	0.	0.	0.	2.25	0.	0.	0.62	0.	0.
150 A	0.	0.	0.	0.	2.25	0.	0.	0.62	0.	0.
L	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
R	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
160 A	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
L	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
R	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
170 A	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
L	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
R	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
180 A	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
L	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.

RADIANCE VALUES ARE IN MICROWATTS. VA AND SA ARE IN DEGREES.

FIGURE 80 CONT.

IR NUMBER OF OBSERVATIONS AS A FUNCTION OF SCATTERING ANGLE

FILTER 3 AT 1105 AST INSOL ANGLE 42.6 DEG
SPECTRAL BAND 2.37 TO 2.80 MICRONS ELEVATION 30.5 KM

VA	0	10	20	30	40	50	60	70	80	90
SA										
0	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
10	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
20	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
30	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
40	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
50	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
60	0.	0.	0.	0.	0.	0.	0.	15.	0.	0.
70	0.	0.	0.	0.	0.	0.	0.	1143.	0.	0.
80	0.	0.	0.	0.	0.	0.	0.	642.	0.	0.
90	0.	0.	0.	0.	192.	0.	0.	541.	0.	0.
100	0.	0.	0.	0.	702.	0.	0.	450.	0.	0.
110	0.	0.	0.	881.	431.	0.	0.	520.	0.	0.
120	0.	0.	0.	462.	378.	0.	0.	506.	0.	0.
130	0.	0.	0.	478.	339.	0.	0.	585.	0.	0.
140	0.	0.	0.	412.	272.	0.	0.	343.	0.	0.
150	0.	0.	0.	402.	336.	0.	0.	0.	0.	0.
160	0.	0.	0.	45.	45.	0.	0.	0.	0.	0.
170	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
180	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.

RADIANCE VALUES ARE IN MICROWATTS. VA AND SA ARE IN DEGREES.

FIGURE 81

IR MEAN RADIANCE AS A FUNCTION OF SCATTERING ANGLE

FILTER 3 AT 1105 AST INSOL ANGLE 42.6 DEG
SPECTRAL BAND 2.37 TO 2.80 MICRONS ELEVATION 30.5 KM

VA	0	10	20	30	40	50	60	70	80	90
SA										
0	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
10	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
20	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
30	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
40	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
50	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
60	0.	0.	0.	0.	0.	0.	0.	10.28	0.	0.
70	0.	0.	0.	0.	0.	0.	0.	19.76	0.	0.
80	0.	0.	0.	0.	0.	0.	0.	18.89	0.	0.
90	0.	0.	0.	0.	10.11	0.	0.	15.14	0.	0.
100	0.	0.	0.	0.	10.88	0.	0.	15.70	0.	0.
110	0.	0.	0.	7.57	9.06	0.	0.	12.57	0.	0.
120	0.	0.	0.	7.75	4.48	0.	0.	7.96	0.	0.
130	0.	0.	0.	20.97	3.63	0.	0.	18.35	0.	0.
140	0.	0.	0.	13.06	9.04	0.	0.	30.66	0.	0.
150	0.	0.	0.	12.63	14.08	0.	0.	0.	0.	0.
160	0.	0.	0.	5.15	9.41	0.	0.	0.	0.	0.
170	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
180	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.

RADIANCE VALUES ARE IN MICROWATTS. VA AND SA ARE IN DEGREES.

FIGURE 82

IR RMS FLUCTUATION AS A FUNCTION OF SCATTERING ANGLE

FILTER 3 AT 1105 AST INSOL ANGLE 42.6 DEG
SPECTRAL BAND 2.37 TO 2.80 MICRONS ELEVATION 30.5 KM

VA	0	10	20	30	40	50	60	70	80	90
SA										
0	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
10	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
20	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
30	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
40	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
50	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
60	0.	0.	0.	0.	0.	0.	0.	1.16	0.	0.
70	0.	0.	0.	0.	0.	0.	0.	5.88	0.	0.
80	0.	0.	0.	0.	0.	0.	0.	6.57	0.	0.
90	0.	0.	0.	0.	4.44	0.	0.	6.28	0.	0.
100	0.	0.	0.	0.	11.05	0.	0.	10.52	0.	0.
110	0.	0.	0.	8.17	9.83	0.	0.	4.38	0.	0.
120	0.	0.	0.	9.16	4.24	0.	0.	8.94	0.	0.
130	0.	0.	0.	7.75	3.68	0.	0.	17.86	0.	0.
140	0.	0.	0.	2.34	5.89	0.	0.	15.33	0.	0.
150	0.	0.	0.	4.93	8.22	0.	0.	0.	0.	0.
160	0.	0.	0.	0.61	2.15	0.	0.	0.	0.	0.
170	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
180	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.

RADIANCE VALUES ARE IN MICROWATTS. VA AND SA ARE IN DEGREES.

FIGURE 83

IR NUMBER OF OBSERVATIONS AS A FUNCTION OF SUN AZINUTH

FILTER 2 AT 1109 AST INSOL ANGLE 42.5 DEG
SPECTRAL BAND 2.63 TO 2.80 MICRONS ELEVATION 30.5 KM

VA SA	0	10	20	30	40	50	60	70	80	90
R	0.	0.	0.	75.	0.	0.	60.	60.	0.	0.
0 A	0.	0.	0.	38.	0.	0.	30.	75.	0.	0.
L	0.	0.	0.	0.	0.	0.	0.	90.	0.	0.
R	0.	0.	0.	179.	0.	0.	195.	194.	0.	0.
10 A	0.	0.	0.	90.	0.	68.	98.	187.	0.	0.
L	0.	0.	0.	0.	0.	135.	0.	180.	0.	0.
R	0.	0.	0.	195.	0.	0.	191.	210.	0.	0.
20 A	0.	0.	0.	98.	0.	90.	96.	202.	0.	0.
L	0.	0.	0.	0.	0.	180.	0.	194.	0.	0.
R	0.	0.	0.	191.	0.	0.	105.	195.	0.	0.
30 A	0.	0.	0.	96.	0.	113.	53.	195.	0.	0.
L	0.	0.	0.	0.	0.	225.	0.	194.	0.	0.
R	0.	0.	43.	118.	0.	0.	180.	194.	0.	0.
40 A	0.	0.	22.	59.	0.	105.	90.	187.	0.	0.
L	0.	0.	0.	0.	0.	209.	0.	179.	0.	0.
R	0.	0.	0.	148.	0.	0.	210.	165.	0.	0.
50 A	0.	0.	0.	74.	0.	89.	105.	180.	0.	0.
L	0.	0.	0.	0.	0.	178.	0.	194.	0.	0.
R	0.	0.	0.	208.	0.	0.	150.	165.	0.	0.
60 A	0.	0.	0.	104.	0.	105.	75.	172.	0.	0.
L	0.	0.	0.	0.	0.	210.	0.	178.	0.	0.

RADIANCE VALUES ARE IN MICROWATTS. VA AND SA ARE IN DEGREES.

FIGURE 84

IR NUMBER OF OBSERVATIONS AS A FUNCTION OF SUN AZIMUTH

FILTER 2 AT 1109 AST INSOL ANGLE 42.5 DEG
SPECTRAL BAND 2.63 TO 2.80 MICRONS ELEVATION 30.5 KM

VA SA	0	10	20	30	40	50	60	70	80	90
R	0.	0.	0.	193.	0.	0.	165.	116.	0.	0.
70 A	0.	0.	0.	97.	0.	96.	83.	139.	0.	0.
L	0.	0.	0.	0.	0.	192.	0.	162.	0.	0.
R	0.	0.	0.	209.	0.	0.	208.	193.	0.	0.
80 A	0.	0.	0.	105.	0.	97.	104.	186.	0.	0.
L	0.	0.	0.	0.	0.	193.	0.	178.	0.	0.
R	0.	0.	0.	195.	0.	0.	195.	135.	0.	0.
90 A	0.	0.	0.	98.	0.	90.	98.	150.	0.	0.
L	0.	0.	0.	0.	0.	179.	0.	164.	0.	0.
R	0.	0.	0.	179.	0.	0.	192.	194.	0.	0.
100 A	0.	0.	0.	90.	0.	105.	96.	209.	0.	0.
L	0.	0.	0.	0.	0.	210.	0.	224.	0.	0.
R	0.	0.	0.	89.	0.	0.	133.	161.	0.	0.
110 A	0.	0.	0.	45.	0.	111.	67.	141.	0.	0.
L	0.	0.	0.	0.	0.	222.	0.	120.	0.	0.
R	0.	0.	0.	178.	0.	0.	225.	210.	0.	0.
120 A	0.	0.	0.	89.	0.	97.	113.	195.	0.	0.
L	0.	0.	0.	0.	0.	194.	0.	180.	0.	0.

RADIANCE VALUES ARE IN MICROWATTS. VA AND SA ARE IN DEGREES.

FIGURE 84 CONT.

IR NUMBER OF OBSERVATIONS AS A FUNCTION OF SUN AZIMUTH

FILTER 2 AT 1109 AST INSOL ANGLE 42.5 DEG
SPECTRAL BAND 2.63 TO 2.80 MICRONS ELEVATION 30.5 KM

VA	0	10	20	30	40	50	60	70	80	90
SA										
R	0.	0.	0.	208.	0.	0.	104.	209.	0.	0.
130 A	0.	0.	0.	104.	0.	105.	52.	187.	0.	0.
L	0.	0.	0.	0.	0.	210.	0.	165.	0.	0.
R	0.	0.	0.	180.	0.	0.	0.	195.	0.	0.
140 A	0.	0.	0.	90.	0.	112.	0.	195.	0.	0.
L	0.	0.	0.	0.	0.	224.	0.	194.	0.	0.
R	0.	0.	0.	0.	0.	0.	0.	45.	0.	0.
150 A	0.	0.	0.	0.	0.	23.	0.	68.	0.	0.
L	0.	0.	0.	0.	0.	45.	0.	90.	0.	0.
R	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
160 A	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
L	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
R	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
170 A	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
L	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
R	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
180 A	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
L	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.

RADIANCE VALUES ARE IN MICROWATTS. VA AND SA ARE IN DEGREES.

FIGURE 84 CONT.

IR MEAN RADIANCE AS A FUNCTION OF SUN AZIMUTH

FILTER 2 AT 1109 AST INSOL ANGLE 42.5 DEG
SPECTRAL BAND 2.63 TO 2.80 MICRONS ELEVATION 30.5 KM

VA	0	10	20	30	40	50	60	70	80	90
SA										
R	0.	0.	0.	0.19	0.	0.	0.19	0.20	0.	0.
0 A	0.	0.	0.	0.19	0.	0.	0.19	0.18	0.	0.
L	0.	0.	0.	0.	0.	0.	0.	0.17	0.	0.
R	0.	0.	0.	0.17	0.	0.	0.18	0.17	0.	0.
10 A	0.	0.	0.	0.17	0.	0.18	0.18	0.18	0.	0.
L	0.	0.	0.	0.	0.	0.18	0.	0.19	0.	0.
R	0.	0.	0.	0.18	0.	0.	0.19	0.16	0.	0.
20 A	0.	0.	0.	0.18	0.	0.17	0.19	0.17	0.	0.
L	0.	0.	0.	0.	0.	0.17	0.	0.18	0.	0.
R	0.	0.	0.	0.21	0.	0.	0.19	0.18	0.	0.
30 A	0.	0.	0.	0.21	0.	0.21	0.19	0.18	0.	0.
L	0.	0.	0.	0.	0.	0.21	0.	0.18	0.	0.
R	0.	0.	0.17	0.20	0.	0.	0.19	0.18	0.	0.
40 A	0.	0.	0.17	0.20	0.	0.20	0.19	0.19	0.	0.
L	0.	0.	0.	0.	0.	0.20	0.	0.20	0.	0.
R	0.	0.	0.	0.21	0.	0.	0.19	0.17	0.	0.
50 A	0.	0.	0.	0.21	0.	0.21	0.19	0.18	0.	0.
L	0.	0.	0.	0.	0.	0.21	0.	0.18	0.	0.
R	0.	0.	0.	0.17	0.	0.	0.16	0.19	0.	0.
60 A	0.	0.	0.	0.17	0.	0.21	0.16	0.18	0.	0.
L	0.	0.	0.	0.	0.	0.21	0.	0.18	0.	0.

RADIANCE VALUES ARE IN MICROWATTS. VA AND SA ARE IN DEGREES.

FIGURE 85

IR MEAN RADIANCE AS A FUNCTION OF SUN AZIMUTH

FILTER 2 AT 1109 AST INSOL ANGLE 42.5 DEG
SPECTRAL BAND 2.63 TO 2.80 MICRONS ELEVATION 30.5 KM

VA	0	10	20	30	40	50	60	70	80	90
SA										
R	0.	0.	0.	0.16	0.	0.	0.17	0.20	0.	0.
70 A	0.	0.	0.	0.16	0.	0.19	0.17	0.19	0.	0.
L	0.	0.	0.	0.	0.	0.19	0.	0.19	0.	0.
R	0.	0.	0.	0.19	0.	0.	0.16	0.17	0.	0.
80 A	0.	0.	0.	0.19	0.	0.19	0.16	0.19	0.	0.
L	0.	0.	0.	0.	0.	0.19	0.	0.21	0.	0.
R	0.	0.	0.	0.18	0.	0.	0.18	0.21	0.	0.
90 A	0.	0.	0.	0.18	0.	0.19	0.18	0.20	0.	0.
L	0.	0.	0.	0.	0.	0.19	0.	0.19	0.	0.
R	0.	0.	0.	0.18	0.	0.	0.19	0.17	0.	0.
100 A	0.	0.	0.	0.18	0.	0.20	0.19	0.18	0.	0.
L	0.	0.	0.	0.	0.	0.20	0.	0.19	0.	0.
R	0.	0.	0.	0.19	0.	0.	0.18	0.20	0.	0.
110 A	0.	0.	0.	0.19	0.	0.21	0.18	0.20	0.	0.
L	0.	0.	0.	0.	0.	0.21	0.	0.20	0.	0.
R	0.	0.	0.	0.19	0.	0.	0.18	0.17	0.	0.
120 A	0.	0.	0.	0.19	0.	0.18	0.18	0.18	0.	0.
L	0.	0.	0.	0.	0.	0.18	0.	0.19	0.	0.

RADIANCE VALUES ARE IN MICROWATTS. VA AND SA ARE IN DEGREES.

FIGURE 85 CONT.

IR MEAN RADIANCE AS A FUNCTION OF SUN AZIMUTH

FILTER 2 AT 1109 AST INSOL ANGLE 42.5 DEG
SPECTRAL BAND 2.63 TO 2.80 MICRONS ELEVATION 30.5 KM

	VA	0	10	20	30	40	50	60	70	80	90
SA											
	R	0.	0.	0.	0.20	0.	0.	0.20	0.18	0.	0.
130	A	0.	0.	0.	0.20	0.	0.20	0.20	0.18	0.	0.
	L	0.	0.	0.	0.	0.	0.20	0.	0.18	0.	0.
	R	0.	0.	0.	0.20	0.	0.	0.	0.26	0.	0.
140	A	0.	0.	0.	0.20	0.	0.20	0.	0.22	0.	0.
	L	0.	0.	0.	0.	0.	0.20	0.	0.18	0.	0.
	R	0.	0.	0.	0.	0.	0.	0.	0.29	0.	0.
150	A	0.	0.	0.	0.	0.	0.19	0.	0.23	0.	0.
	L	0.	0.	0.	0.	0.	0.19	0.	0.20	0.	0.
	R	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
160	A	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
	L	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
	R	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
170	A	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
	L	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
	R	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
180	A	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
	L	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.

RADIANCE VALUES ARE IN MICROWATTS. VA AND SA ARE IN DEGREES.

FIGURE 85 CONT.

IR RMS FLUCTUATION AS A FUNCTION OF SUN AZIMUTH

FILTER 2 AT 1109 AST INSOL ANGLE 42.5 DEG
SPECTRAL BAND 2.63 TO 2.80 MICRONS ELEVATION 30.5 KM

VA	0	10	20	30	40	50	60	70	80	90
SA										
R	0.	0.	0.	0.15	0.	0.	0.14	0.14	0.	0.
0 A	0.	0.	0.	0.15	0.	0.	0.14	0.19	0.	0.
L	0.	0.	0.	0.	0.	0.	0.	0.12	0.	0.
R	0.	0.	0.	0.13	0.	0.	0.14	0.13	0.	0.
10 A	0.	0.	0.	0.13	0.	0.13	0.14	0.20	0.	0.
L	0.	0.	0.	0.	0.	0.13	0.	0.15	0.	0.
R	0.	0.	0.	0.14	0.	0.	0.13	0.13	0.	0.
20 A	0.	0.	0.	0.14	0.	0.13	0.13	0.18	0.	0.
L	0.	0.	0.	0.	0.	0.13	0.	0.13	0.	0.
R	0.	0.	0.	0.15	0.	0.	0.13	0.13	0.	0.
30 A	0.	0.	0.	0.15	0.	0.15	0.13	0.19	0.	0.
L	0.	0.	0.	0.	0.	0.15	0.	0.13	0.	0.
R	0.	0.	0.15	0.17	0.	0.	0.14	0.12	0.	0.
40 A	0.	0.	0.15	0.17	0.	0.14	0.14	0.19	0.	0.
L	0.	0.	0.	0.	0.	0.14	0.	0.15	0.	0.
R	0.	0.	0.	0.15	0.	0.	0.13	0.13	0.	0.
50 A	0.	0.	0.	0.15	0.	0.16	0.13	0.18	0.	0.
L	0.	0.	0.	0.	0.	0.16	0.	0.13	0.	0.
R	0.	0.	0.	0.14	0.	0.	0.13	0.15	0.	0.
60 A	0.	0.	0.	0.14	0.	0.15	0.13	0.20	0.	0.
L	0.	0.	0.	0.	0.	0.15	0.	0.14	0.	0.

RADIANCE VALUES ARE IN MICROWATTS. VA AND SA ARE IN DEGREES.

FIGURE 86

IR RMS FLUCTUATION AS A FUNCTION OF SUN AZIMUTH

FILTER 2 AT 1109 AST INSOL ANGLE 42.5 DEG
SPECTRAL BAND 2.63 TO 2.80 MICRONS ELEVATION 30.5 KM

VA	0	10	20	30	40	50	60	70	80	90
SA										
R	0.	0.	0.	0.13	0.	0.	0.13	0.15	0.	0.
70 A	0.	0.	0.	0.13	0.	0.14	0.13	0.20	0.	0.
L	0.	0.	0.	0.	0.	0.14	0.	0.14	0.	0.
R	0.	0.	0.	0.13	0.	0.	0.12	0.14	0.	0.
80 A	0.	0.	0.	0.13	0.	0.15	0.12	0.20	0.	0.
L	0.	0.	0.	0.	0.	0.15	0.	0.15	0.	0.
R	0.	0.	0.	0.14	0.	0.	0.12	0.16	0.	0.
90 A	0.	0.	0.	0.14	0.	0.14	0.12	0.21	0.	0.
L	0.	0.	0.	0.	0.	0.14	0.	0.14	0.	0.
R	0.	0.	0.	0.13	0.	0.	0.15	0.14	0.	0.
100 A	0.	0.	0.	0.13	0.	0.14	0.15	0.20	0.	0.
L	0.	0.	0.	0.	0.	0.14	0.	0.14	0.	0.
R	0.	0.	0.	0.14	0.	0.	0.13	0.15	0.	0.
110 A	0.	0.	0.	0.14	0.	0.14	0.13	0.21	0.	0.
L	0.	0.	0.	0.	0.	0.14	0.	0.15	0.	0.
R	0.	0.	0.	0.13	0.	0.	0.14	0.13	0.	0.
120 A	0.	0.	0.	0.13	0.	0.12	0.14	0.18	0.	0.
L	0.	0.	0.	0.	0.	0.12	0.	0.13	0.	0.

RADIANCE VALUES ARE IN MICROWATTS. VA AND SA ARE IN DEGREES.

FIGURE 86 CONT.

IR RMS FLUCTUATION AS A FUNCTION OF SUN AZIMUTH

FILTER 2 AT 1109 AST INSOL ANGLE 42.5 DEG
SPECTRAL BAND 2.63 TO 2.80 MICRONS ELEVATION 30.5 KM

	VA	0	10	20	30	40	50	60	70	80	90
SA											
	R	0.	0.	0.	0.15	0.	0.	0.14	0.15	0.	0.
130	A	0.	0.	0.	0.15	0.	0.15	0.14	0.20	0.	0.
	L	0.	0.	0.	0.	0.	0.15	0.	0.13	0.	0.
	R	0.	0.	0.	0.15	0.	0.	0.	0.18	0.	0.
140	A	0.	0.	0.	0.15	0.	0.14	0.	0.22	0.	0.
	L	0.	0.	0.	0.	0.	0.14	0.	0.13	0.	0.
	R	0.	0.	0.	0.	0.	0.	0.	0.19	0.	0.
150	A	0.	0.	0.	0.	0.	0.13	0.	0.23	0.	0.
	L	0.	0.	0.	0.	0.	0.13	0.	0.13	0.	0.
	R	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
160	A	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
	L	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
	R	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
170	A	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
	L	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
	R	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
180	A	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
	L	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.

RADIANCE VALUES ARE IN MICROWATTS. VA AND SA ARE IN DEGREES.

FIGURE 86 CONT.

IR NUMBER OF OBSERVATIONS AS A FUNCTION OF SCATTERING ANGLE

FILTER 2 AT 1109 AST INSOL ANGLE 42.5 DEG
SPECTRAL BAND 2.63 TO 2.80 MICRONS ELEVATION 30.5 KM

SA	VA	0	10	20	30	40	50	60	70	80	90
0		0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
10		0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
20		0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
30		0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
40		0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
50		0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
60		0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
70		0.	0.	0.	0.	0.	0.	0.	1450.	0.	0.
80		0.	0.	0.	0.	0.	0.	476.	747.	0.	0.
90		0.	0.	0.	0.	0.	555.	465.	502.	0.	0.
100		0.	0.	0.	0.	0.	537.	315.	566.	0.	0.
110		0.	0.	0.	655.	0.	357.	328.	583.	0.	0.
120		0.	0.	43.	608.	0.	327.	281.	446.	0.	0.
130		0.	0.	0.	523.	0.	357.	269.	569.	0.	0.
140		0.	0.	0.	312.	0.	314.	179.	464.	0.	0.
150		0.	0.	0.	447.	0.	314.	0.	0.	0.	0.
160		0.	0.	0.	0.	0.	45.	0.	0.	0.	0.
170		0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
180		0.	0.	0.	0.	0.	0.	0.	0.	0.	0.

RADIANCE VALUES ARE IN MICROWATTS. VA AND SA ARE IN DEGREES.

FIGURE 87

IR MEAN RADIANCE AS A FUNCTION OF SCATTERING ANGLE

FILTER 2 AT 1109 AST INSOL ANGLE 42.5 DEG
SPECTRAL BAND 2.63 TO 2.80 MICRONS ELEVATION 30.5 KM

VA	0	10	20	30	40	50	60	70	80	90
SA										
0	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
10	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
20	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
30	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
40	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
50	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
60	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
70	0.	0.	0.	0.	0.	0.	0.	0.18	0.	0.
80	0.	0.	0.	0.	0.	0.	0.19	0.18	0.	0.
90	0.	0.	0.	0.	0.	0.19	0.19	0.19	0.	0.
100	0.	0.	0.	0.	0.	0.21	0.17	0.19	0.	0.
110	0.	0.	0.	0.19	0.	0.19	0.17	0.19	0.	0.
120	0.	0.	0.17	0.18	0.	0.19	0.19	0.19	0.	0.
130	0.	0.	0.	0.18	0.	0.21	0.18	0.18	0.	0.
140	0.	0.	0.	0.19	0.	0.19	0.19	0.23	0.	0.
150	0.	0.	0.	0.20	0.	0.20	0.	0.	0.	0.
160	0.	0.	0.	0.	0.	0.19	0.	0.	0.	0.
170	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
180	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.

RADIANCE VALUES ARE IN MICROWATTS. VA AND SA ARE IN DEGREES.

FIGURE 88

IR RMS FLUCTUATION AS A FUNCTION OF SCATTERING ANGLE

FILTER 2 AT 1109 ÅST INSOL ANGLE 42.5 DEG
SPECTRAL BAND 2.63 TO 2.80 MICRONS ELEVATION 30.5 KM

SA	VA	0	10	20	30	40	50	60	70	80	90
0	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
10	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
20	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
30	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
40	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
50	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
60	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
70	0.	0.	0.	0.	0.	0.	0.	0.	0.13	0.	0.
80	0.	0.	0.	0.	0.	0.	0.	0.13	0.13	0.	0.
90	0.	0.	0.	0.	0.	0.	0.14	0.13	0.15	0.	0.
100	0.	0.	0.	0.	0.	0.	0.15	0.13	0.14	0.	0.
110	0.	0.	0.	0.14	0.	0.	0.15	0.12	0.15	0.	0.
120	0.	0.	0.15	0.14	0.	0.	0.14	0.14	0.14	0.	0.
130	0.	0.	0.	0.13	0.	0.	0.14	0.14	0.14	0.	0.
140	0.	0.	0.	0.13	0.	0.	0.14	0.14	0.16	0.	0.
150	0.	0.	0.	0.15	0.	0.	0.14	0.	0.	0.	0.
160	0.	0.	0.	0.	0.	0.	0.13	0.	0.	0.	0.
170	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
180	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.

RADIANCE VALUES ARE IN MICROWATTS. VA AND SA ARE IN DEGREES.

FIGURE 89

IR NUMBER OF OBSERVATIONS AS A FUNCTION OF SUN AZIMUTH

FILTER 10 AT 1115 AST INSOL ANGLE 42.3 DEG
SPECTRAL BAND 3.95 TO 4.80 MICRONS ELEVATION 30.5 KM

VA SA	0	10	20	30	40	50	60	70	80	90
R	0.	0.	0.	105.	0.	0.	0.	105.	0.	0.
0 A	0.	0.	0.	53.	0.	0.	0.	83.	0.	0.
L	0.	0.	0.	0.	0.	0.	0.	60.	0.	0.
R	0.	0.	0.	210.	0.	0.	0.	180.	0.	0.
10 A	0.	0.	0.	105.	0.	68.	0.	180.	0.	0.
L	0.	0.	0.	0.	0.	135.	0.	179.	0.	0.
R	0.	0.	0.	195.	0.	0.	0.	195.	0.	0.
20 A	0.	0.	0.	98.	0.	83.	0.	195.	0.	0.
L	0.	0.	0.	0.	0.	165.	0.	195.	0.	0.
R	0.	0.	0.	210.	0.	0.	0.	180.	0.	0.
30 A	0.	0.	0.	105.	0.	113.	0.	165.	0.	0.
L	0.	0.	0.	0.	0.	225.	0.	150.	0.	0.
R	0.	0.	0.	195.	0.	0.	0.	150.	0.	0.
40 A	0.	0.	0.	98.	0.	105.	0.	158.	0.	0.
L	0.	0.	0.	0.	0.	210.	0.	165.	0.	0.
R	0.	0.	0.	165.	0.	0.	0.	195.	0.	0.
50 A	0.	0.	0.	83.	0.	98.	0.	180.	0.	0.
L	0.	0.	0.	0.	0.	195.	0.	165.	0.	0.
R	0.	0.	0.	210.	0.	0.	0.	195.	0.	0.
60 A	0.	0.	0.	105.	0.	113.	0.	158.	0.	0.
L	0.	0.	0.	0.	0.	225.	0.	120.	0.	0.

RADIANCE VALUES ARE IN MICROWATTS. VA AND SA ARE IN DEGREES.

IR NUMBER OF OBSERVATIONS AS A FUNCTION OF SUN AZIMUTH

FILTER 10 AT 1115 AST INSOL ANGLE 42.3 DEG
SPECTRAL BAND 3.95 TO 4.80 MICRONS ELEVATION 30.5 KM

VA	0	10	20	30	40	50	60	70	80	90
SA										
R	0.	0.	0.	195.	0.	0.	0.	180.	0.	0.
70 A	0.	0.	0.	98.	0.	98.	0.	173.	0.	0.
L	0.	0.	0.	0.	0.	195.	0.	165.	0.	0.
R	0.	0.	0.	180.	0.	0.	0.	120.	0.	0.
80 A	0.	0.	0.	90.	0.	105.	0.	158.	0.	0.
L	0.	0.	0.	0.	0.	210.	0.	195.	0.	0.
R	0.	0.	0.	210.	0.	0.	0.	240.	0.	0.
90 A	0.	0.	0.	105.	0.	98.	0.	188.	0.	0.
L	0.	0.	0.	0.	0.	195.	0.	135.	0.	0.
R	0.	0.	0.	210.	0.	0.	0.	195.	0.	0.
100 A	0.	0.	0.	105.	0.	113.	0.	188.	0.	0.
L	0.	0.	0.	0.	0.	225.	0.	180.	0.	0.
R	0.	0.	0.	195.	0.	0.	0.	180.	0.	0.
110 A	0.	0.	0.	98.	0.	68.	0.	165.	0.	0.
L	0.	0.	0.	0.	0.	135.	0.	150.	0.	0.
R	0.	0.	0.	210.	0.	0.	0.	225.	0.	0.
120 A	0.	0.	0.	105.	0.	68.	0.	113.	0.	0.
L	0.	0.	0.	0.	0.	135.	0.	0.	0.	0.

RADIANCE VALUES ARE IN MICROWATTS. VA AND SA ARE IN DEGREES.

FIGURE 90 CONT.

IR NUMBER OF OBSERVATIONS AS A FUNCTION OF SUN AZIMUTH

FILTER 10 AT 1115 AST INSOL ANGLE 42.3 DEG
SPECTRAL BAND 3.95 TO 4.80 MICRONS ELEVATION 30.5 KM

VA SA	0	10	20	30	40	50	60	70	80	90
R	0.	0.	30.	90.	0.	0.	0.	165.	0.	0.
130 A	0.	0.	15.	45.	0.	98.	0.	135.	0.	0.
L	0.	0.	0.	0.	0.	195.	0.	104.	0.	0.
R	0.	0.	0.	150.	0.	0.	0.	105.	0.	0.
140 A	0.	0.	0.	75.	0.	90.	0.	150.	0.	0.
L	0.	0.	0.	0.	0.	180.	0.	195.	0.	0.
R	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
150 A	0.	0.	0.	0.	0.	30.	0.	0.	0.	0.
L	0.	0.	0.	0.	0.	60.	0.	0.	0.	0.
R	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
160 A	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
L	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
R	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
170 A	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
L	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
R	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
180 A	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
L	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.

RADIANCE VALUES ARE IN MICROWATTS. VA AND SA ARE IN DEGREES.

FIGURE 90 CONT.

IR MEAN RADIANCE AS A FUNCTION OF SUN AZIMUTH

FILTER 10 AT 1115 AST INSOL ANGLE 42.3 DEG
SPECTRAL BAND 3.95 TO 4.80 MICRONS ELEVATION 30.5 KM

VA	0	10	20	30	40	50	60	70	80	90
SA										
R	0.	0.	0.	26.49	0.	0.	0.	14.05	0.	0.
O A	0.	0.	0.	26.49	0.	0.	0.	13.71	0.	0.
L	0.	0.	0.	0.	0.	0.	0.	13.11	0.	0.
R	0.	0.	0.	31.19	0.	0.	0.	14.55	0.	0.
10 A	0.	0.	0.	31.19	0.	24.53	0.	13.05	0.	0.
L	0.	0.	0.	0.	0.	24.53	0.	11.55	0.	0.
R	0.	0.	0.	32.22	0.	0.	0.	14.96	0.	0.
20 A	0.	0.	0.	32.22	0.	22.34	0.	13.27	0.	0.
L	0.	0.	0.	0.	0.	22.34	0.	11.58	0.	0.
R	0.	0.	0.	24.74	0.	0.	0.	14.36	0.	0.
30 A	0.	0.	0.	24.74	0.	19.48	0.	13.10	0.	0.
L	0.	0.	0.	0.	0.	19.48	0.	11.58	0.	0.
R	0.	0.	0.	22.62	0.	0.	0.	13.45	0.	0.
40 A	0.	0.	0.	22.62	0.	20.50	0.	12.51	0.	0.
L	0.	0.	0.	0.	0.	20.50	0.	11.66	0.	0.
R	0.	0.	0.	18.46	0.	0.	0.	13.32	0.	0.
50 A	0.	0.	0.	18.46	0.	21.81	0.	12.51	0.	0.
L	0.	0.	0.	0.	0.	21.81	0.	11.55	0.	0.
R	0.	0.	0.	13.46	0.	0.	0.	14.08	0.	0.
60 A	0.	0.	0.	13.46	0.	21.44	0.	13.13	0.	0.
L	0.	0.	0.	0.	0.	21.44	0.	11.59	0.	0.

RADIANCE VALUES ARE IN MICROWATTS. VA AND SA ARE IN DEGREES.

FIGURE 91

IR MEAN RADIANCE AS A FUNCTION OF SUN AZIMUTH

FILTER 10 AT 1115 AST INSOL ANGLE 42.3 DEG
SPECTRAL BAND 3.95 TO 4.80 MICRONS ELEVATION 30.5 KM

VA	0	10	20	30	40	50	60	70	80	90
SA										
R	0.	0.	0.	23.74	0.	0.	0.	13.61	0.	0.
70 A	0.	0.	0.	23.74	0.	20.03	0.	12.58	0.	0.
L	0.	0.	0.	0.	0.	20.03	0.	11.47	0.	0.
R	0.	0.	0.	21.26	0.	0.	0.	13.79	0.	0.
80 A	0.	0.	0.	21.26	0.	22.81	0.	12.39	0.	0.
L	0.	0.	0.	0.	0.	22.81	0.	11.53	0.	0.
R	0.	0.	0.	16.67	0.	0.	0.	13.97	0.	0.
90 A	0.	0.	0.	16.67	0.	22.19	0.	13.08	0.	0.
L	0.	0.	0.	0.	0.	22.19	0.	11.50	0.	0.
R	0.	0.	0.	11.56	0.	0.	0.	14.52	0.	0.
100 A	0.	0.	0.	11.56	0.	17.88	0.	13.09	0.	0.
L	0.	0.	0.	0.	0.	17.88	0.	11.55	0.	0.
R	0.	0.	0.	15.13	0.	0.	0.	14.47	0.	0.
110 A	0.	0.	0.	15.13	0.	16.27	0.	13.23	0.	0.
L	0.	0.	0.	0.	0.	16.27	0.	11.74	0.	0.
R	0.	0.	0.	18.74	0.	0.	0.	14.07	0.	0.
120 A	0.	0.	0.	18.74	0.	13.35	0.	14.07	0.	0.
L	0.	0.	0.	0.	0.	13.35	0.	0.	0.	0.

RADIANCE VALUES ARE IN MICROWATTS. VA AND SA ARE IN DEGREES.

FIGURE 91 CONT.

IR MEAN RADIANCE AS A FUNCTION OF SUN AZIMUTH

FILTER 10 AT 1115 AST INSOL ANGLE 42.3 DEG
SPECTRAL BAND 3.95 TO 4.80 MICRONS ELEVATION 30.5 KM

	VA	0	10	20	30	40	50	60	70	80	90
SA											
	R	0.	0.	11.34	13.57	0.	0.	0.	14.13	0.	0.
130	A	0.	0.	11.34	13.57	0.	15.59	0.	13.74	0.	0.
	L	0.	0.	0.	0.	0.	15.59	0.	13.13	0.	0.
	R	0.	0.	0.	25.12	0.	0.	0.	13.53	0.	0.
140	A	0.	0.	0.	25.12	0.	17.02	0.	12.27	0.	0.
	L	0.	0.	0.	0.	0.	17.02	0.	11.59	0.	0.
	R	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
150	A	0.	0.	0.	0.	0.	16.13	0.	0.	0.	0.
	L	0.	0.	0.	0.	0.	16.13	0.	0.	0.	0.
	R	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
160	A	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
	L	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
	R	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
170	A	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
	L	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
	R	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
180	A	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
	L	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.

RADIANCE VALUES ARE IN MICROWATTS. VA AND SA ARE IN DEGREES.

FIGURE 91 CONT.

IR RMS FLUCTUATION AS A FUNCTION OF SUN AZIMUTH

FILTER 10 AT 1115 AST INSOL ANGLE 42.3 DEG
SPECTRAL BAND 3.95 TO 4.80 MICRONS ELEVATION 30.5 KM

VA	0	10	20	30	40	50	60	70	80	90
SA										
R	0.	0.	0.	2.04	0.	0.	0.	1.02	0.	0.
0 A	0.	0.	0.	2.04	0.	0.	0.	1.47	0.	0.
L	0.	0.	0.	0.	0.	0.	0.	1.07	0.	0.
R	0.	0.	0.	1.32	0.	0.	0.	1.09	0.	0.
10 A	0.	0.	0.	1.32	0.	2.28	0.	1.50	0.	0.
L	0.	0.	0.	0.	0.	2.28	0.	1.03	0.	0.
R	0.	0.	0.	1.02	0.	0.	0.	1.00	0.	0.
20 A	0.	0.	0.	1.02	0.	4.45	0.	1.44	0.	0.
L	0.	0.	0.	0.	0.	4.45	0.	1.03	0.	0.
R	0.	0.	0.	2.30	0.	0.	0.	1.01	0.	0.
30 A	0.	0.	0.	2.30	0.	1.57	0.	1.44	0.	0.
L	0.	0.	0.	0.	0.	1.57	0.	1.03	0.	0.
R	0.	0.	0.	1.20	0.	0.	0.	1.10	0.	0.
40 A	0.	0.	0.	1.20	0.	1.68	0.	1.51	0.	0.
L	0.	0.	0.	0.	0.	1.68	0.	1.04	0.	0.
R	0.	0.	0.	2.61	0.	0.	0.	0.98	0.	0.
50 A	0.	0.	0.	2.61	0.	1.56	0.	1.43	0.	0.
L	0.	0.	0.	0.	0.	1.56	0.	1.04	0.	0.
R	0.	0.	0.	1.99	0.	0.	0.	1.01	0.	0.
60 A	0.	0.	0.	1.99	0.	1.64	0.	1.43	0.	0.
L	0.	0.	0.	0.	0.	1.64	0.	1.01	0.	0.

RADIANCE VALUES ARE IN MICROWATTS. VA AND SA ARE IN DEGREES.

FIGURE 92

IR RMS FLUCTUATION AS A FUNCTION OF SUN AZIMUTH

FILTER 10 AT 1115 AST INSOL ANGLE 42.3 DEG
SPECTRAL BAND 3.95 TO 4.80 MICRONS ELEVATION 30.5 KM

VA	0	10	20	30	40	50	60	70	80	90
SA										
R	0.	0.	0.	2.87	0.	0.	0.	1.08	0.	0.
70 A	0.	0.	0.	2.87	0.	1.78	0.	1.49	0.	0.
L	0.	0.	0.	0.	0.	1.78	0.	1.03	0.	0.
R	0.	0.	0.	1.20	0.	0.	0.	1.04	0.	0.
80 A	0.	0.	0.	1.20	0.	1.22	0.	1.45	0.	0.
L	0.	0.	0.	0.	0.	1.22	0.	1.02	0.	0.
R	0.	0.	0.	2.41	0.	0.	0.	0.99	0.	0.
90 A	0.	0.	0.	2.41	0.	1.48	0.	1.43	0.	0.
L	0.	0.	0.	0.	0.	1.48	0.	1.03	0.	0.
R	0.	0.	0.	1.03	0.	0.	0.	0.97	0.	0.
100 A	0.	0.	0.	1.03	0.	2.87	0.	1.41	0.	0.
L	0.	0.	0.	0.	0.	2.87	0.	1.02	0.	0.
R	0.	0.	0.	2.16	0.	0.	0.	0.99	0.	0.
110 A	0.	0.	0.	2.16	0.	4.55	0.	1.48	0.	0.
L	0.	0.	0.	0.	0.	4.55	0.	1.09	0.	0.
R	0.	0.	0.	1.34	0.	0.	0.	1.00	0.	0.
120 A	0.	0.	0.	1.34	0.	2.04	0.	1.00	0.	0.
L	0.	0.	0.	0.	0.	2.04	0.	0.	0.	0.

RADIANCE VALUES ARE IN MICROWATTS. VA AND SA ARE IN DEGREES.

FIGURE 92 CONT.

IR RMS FLUCTUATION AS A FUNCTION OF SUN AZIMUTH

FILTER 10 AT 1115 AST INSOL ANGLE 42.3 DEG
SPECTRAL BAND 3.95 TO 4.80 MICRONS ELEVATION 30.5 KM

VA	0	10	20	30	40	50	60	70	80	90
SA										
R	0.	0.	1.10	1.82	0.	0.	0.	1.04	0.	0.
130 A	0.	0.	1.10	1.82	0.	2.77	0.	1.61	0.	0.
L	0.	0.	0.	0.	0.	2.77	0.	1.23	0.	0.
R	0.	0.	0.	4.69	0.	0.	0.	1.02	0.	0.
140 A	0.	0.	0.	4.69	0.	3.15	0.	1.44	0.	0.
L	0.	0.	0.	0.	0.	3.15	0.	1.02	0.	0.
R	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
150 A	0.	0.	0.	0.	0.	1.66	0.	0.	0.	0.
L	0.	0.	0.	0.	0.	1.66	0.	0.	0.	0.
R	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
160 A	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
L	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
R	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
170 A	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
L	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
R	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
180 A	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
L	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.

RADIANCE VALUES ARE IN MICROWATTS. VA AND SA ARE IN DEGREES.

FIGURE 92 CONT.

IR NUMBER OF OBSERVATIONS AS A FUNCTION OF SCATTERING ANGLE

FILTER: 10 AT 1115 AST INSOL ANGLE 42.3 DEG
SPECTRAL BAND 3.95 TO 4.80 MICRONS ELEVATION 30.5 KM

SA	VA	0	10	20	30	40	50	60	70	80	90
0		0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
10		0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
20		0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
30		0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
40		0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
50		0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
60		0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
70		0.	0.	0.	0.	0.	0.	0.	1409.	0.	0.
80		0.	0.	0.	0.	0.	0.	0.	690.	0.	0.
90		0.	0.	0.	0.	0.	525.	0.	555.	0.	0.
100		0.	0.	0.	0.	0.	540.	0.	495.	0.	0.
110		0.	0.	0.	810.	0.	420.	0.	555.	0.	0.
120		0.	0.	0.	645.	0.	375.	0.	435.	0.	0.
130		0.	0.	0.	525.	0.	255.	0.	464.	0.	0.
140		0.	0.	0.	420.	0.	255.	0.	165.	0.	0.
150		0.	0.	30.	330.	0.	270.	0.	0.	0.	0.
160		0.	0.	0.	0.	0.	45.	0.	0.	0.	0.
170		0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
180		0.	0.	0.	0.	0.	0.	0.	0.	0.	0.

RADIANCE VALUES ARE IN MICROWATTS. VA AND SA ARE IN DEGREES.

FIGURE 93

IR MEAN RADIANCE AS A FUNCTION OF SCATTERING ANGLE

FILTER 10 AT 1115 AST INSOL ANGLE 42.3 DEG
SPECTRAL BAND 3.95 TO 4.80 MICRONS ELEVATION 30.5 KM

VA	0	10	20	30	40	50	60	70	80	90
SA										
0	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
10	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
20	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
30	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
40	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
50	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
60	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
70	0.	0.	0.	0.	0.	0.	0.	13.11	0.	0.
80	0.	0.	0.	0.	0.	0.	0.	12.55	0.	0.
90	0.	0.	0.	0.	0.	21.68	0.	12.84	0.	0.
100	0.	0.	0.	0.	0.	21.32	0.	12.73	0.	0.
110	0.	0.	0.	28.18	0.	21.11	0.	13.17	0.	0.
120	0.	0.	0.	18.96	0.	21.64	0.	13.59	0.	0.
130	0.	0.	0.	17.57	0.	16.18	0.	13.41	0.	0.
140	0.	0.	0.	15.39	0.	13.83	0.	12.05	0.	0.
150	0.	0.	11.34	20.04	0.	17.11	0.	0.	0.	0.
160	0.	0.	0.	0.	0.	16.17	0.	0.	0.	0.
170	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
180	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.

RADIANCE VALUES ARE IN MICROWATTS. VA AND SA ARE IN DEGREES.

FIGURE 94

IR RMS FLUCTUATION AS A FUNCTION OF SCATTERING ANGLE

FILTER 10 AT 1115 AST INSOL ANGLE 42.3 DEG
 SPECTRAL BAND 3.95 TO 4.80 MICRONS ELEVATION 30.5 KM

SA	VA	0	10	20	30	40	50	60	70	80	90
0	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
10	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
20	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
30	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
40	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
50	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
60	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
70	0.	0.	0.	0.	0.	0.	0.	0.	1.77	0.	0.
80	0.	0.	0.	0.	0.	0.	0.	0.	1.37	0.	0.
90	0.	0.	0.	0.	0.	0.	3.59	0.	1.59	0.	0.
100	0.	0.	0.	0.	0.	0.	1.71	0.	1.56	0.	0.
110	0.	0.	0.	4.02	0.	2.05	0.	1.74	0.	0.	0.
120	0.	0.	0.	4.95	0.	1.68	0.	1.51	0.	0.	0.
130	0.	0.	0.	4.05	0.	3.82	0.	1.35	0.	0.	0.
140	0.	0.	0.	3.33	0.	2.08	0.	1.37	0.	0.	0.
150	0.	0.	1.10	5.95	0.	2.97	0.	0.	0.	0.	0.
160	0.	0.	0.	0.	7.	1.79	0.	0.	0.	0.	0.
170	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
180	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.

RADIANCE VALUES ARE IN MICROWATTS. VA AND SA ARE IN DEGREES.

FIGURE 95

IR NUMBER OF OBSERVATIONS AS A FUNCTION OF SUN AZIMUTH

FILTER 9 AT 1119 AST INSOL ANGLE 42.2 DEG
SPECTRAL BAND 4.18 TO 4.97 MICRONS ELEVATION 30.5 KM

VA	0	10	20	30	40	50	60	70	80	90
SA										
R	0.	0.	0.	0.	90.	0.	0.	75.	0.	0.
0 A	0.	0.	0.	0.	53.	0.	0.	90.	0.	0.
L	0.	0.	0.	0.	15.	0.	0.	105.	0.	0.
R	0.	0.	0.	0.	194.	0.	0.	225.	0.	0.
10 A	0.	0.	0.	53.	97.	0.	38.	165.	0.	0.
L	0.	0.	0.	105.	0.	0.	75.	105.	0.	0.
R	0.	0.	0.	0.	165.	0.	0.	150.	0.	0.
20 A	0.	0.	0.	105.	83.	0.	90.	173.	0.	0.
L	0.	0.	0.	210.	0.	0.	180.	195.	0.	0.
R	0.	0.	0.	0.	195.	0.	0.	150.	0.	0.
30 A	0.	0.	0.	105.	98.	0.	105.	165.	0.	0.
L	0.	0.	0.	210.	0.	0.	210.	180.	0.	0.
R	0.	0.	0.	0.	180.	0.	0.	195.	0.	0.
40 A	0.	0.	0.	90.	90.	0.	98.	188.	0.	0.
L	0.	0.	0.	180.	0.	0.	195.	180.	0.	0.
R	0.	0.	0.	0.	210.	0.	0.	210.	0.	0.
50 A	0.	0.	0.	98.	105.	0.	105.	180.	0.	0.
L	0.	0.	0.	195.	0.	0.	210.	150.	0.	0.
R	0.	0.	0.	0.	180.	0.	0.	193.	0.	0.
60 A	0.	0.	0.	105.	90.	0.	68.	179.	0.	0.
L	0.	0.	0.	210.	0.	0.	135.	165.	0.	0.

RADIANCE VALUES ARE IN MICROWATTS. VA AND SA ARE IN DEGREES.

FIGURE 96

IR NUMBER OF OBSERVATIONS AS A FUNCTION OF SUN AZIMUTH

FILTER 9 AT 1119 AST INSOL ANGLE 42.2 DEG
SPECTRAL BAND 4.18 TO 4.97 MICRONS ELEVATION 30.5 KM

VA	0	10	20	30	40	50	60	70	80	90
SA										
R	0.	0.	0.	0.	180.	0.	0.	150.	0.	0.
70 A	0.	0.	0.	98.	90.	0.	83.	165.	0.	0.
L	0.	0.	0.	195.	0.	0.	165.	180.	0.	0.
R	0.	0.	0.	0.	150.	0.	0.	180.	0.	0.
80 A	0.	0.	0.	98.	75.	0.	98.	180.	0.	0.
L	0.	0.	0.	195.	0.	0.	195.	180.	0.	0.
R	0.	0.	0.	0.	165.	0.	0.	225.	0.	0.
90 A	0.	0.	0.	113.	83.	0.	90.	203.	0.	0.
L	0.	0.	0.	225.	0.	0.	180.	180.	0.	0.
R	0.	0.	0.	0.	210.	0.	0.	195.	0.	0.
100 A	0.	0.	0.	98.	105.	0.	98.	188.	0.	0.
L	0.	0.	0.	195.	0.	0.	195.	180.	0.	0.
R	0.	0.	0.	0.	165.	0.	0.	195.	0.	0.
110 A	0.	0.	0.	60.	83.	0.	105.	188.	0.	0.
L	0.	0.	0.	119.	0.	0.	210.	180.	0.	0.
R	0.	0.	0.	0.	195.	0.	0.	210.	0.	0.
120 A	0.	0.	0.	105.	98.	0.	90.	195.	0.	0.
L	0.	0.	0.	210.	0.	0.	180.	180.	0.	0.

RADIANCE VALUES ARE IN MICROWATTS. VA AND SA ARE IN DEGREES.

FIGURE 96 CONT.

IR NUMBER OF OBSERVATIONS AS A FUNCTION OF SUN AZIMUTH

FILTER 9 AT 1119 AST INSOL ANGLE 42.2 DEG
SPECTRAL BAND 4.18 TO 4.97 MICRONS ELEVATION 30.5 KM

	VA	0	10	20	30	40	50	60	70	80	90
SA											
	R	0.	0.	0.	0.	195.	0.	0.	225.	0.	0.
130	A	0.	0.	0.	90.	98.	0.	83.	203.	0.	0.
	L	0.	0.	0.	180.	0.	0.	165.	180.	0.	0.
	R	0.	0.	0.	0.	75.	0.	0.	75.	0.	0.
140	A	0.	0.	0.	98.	38.	0.	90.	113.	0.	0.
	L	0.	0.	0.	195.	0.	0.	180.	150.	0.	0.
	R	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
150	A	0.	0.	0.	75.	0.	0.	53.	75.	0.	0.
	L	0.	0.	0.	150.	0.	0.	105.	149.	0.	0.
	R	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
160	A	0.	0.	0.	0.	0.	0.	0.	8.	0.	0.
	L	0.	0.	0.	0.	0.	0.	0.	15.	0.	0.
	R	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
170	A	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
	L	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
	R	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
180	A	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
	L	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.

RADIANCE VALUES ARE IN MICROWATTS. VA AND SA ARE IN DEGREES.

FIGURE 96 CONT.

IR MEAN RADIANCE AS A FUNCTION OF SUN AZIMUTH

FILTER 9 AT 1119 AST INSOL ANGLE 42.2 DEG
SPECTRAL BAND 4.18 TO 4.97 MICRONS ELEVATION 30.5 KM

VA	0	10	20	30	40	50	60	70	80	90
SA										
R	0.	0.	0.	0.	36.66	0.	0.	29.74	0.	0.
0 A	0.	0.	0.	0.	36.39	0.	0.	29.82	0.	0.
L	0.	0.	0.	0.	34.78	0.	0.	29.88	0.	0.
R	0.	0.	0.	0.	37.60	0.	0.	30.51	0.	0.
10 A	0.	0.	0.	38.65	37.60	0.	34.84	30.24	0.	0.
L	0.	0.	0.	38.65	0.	0.	34.84	29.65	0.	0.
R	0.	0.	0.	0.	39.27	0.	0.	31.44	0.	0.
20 A	0.	0.	0.	35.75	39.27	0.	32.79	30.33	0.	0.
L	0.	0.	0.	35.75	0.	0.	32.79	29.47	0.	0.
R	0.	0.	0.	0.	37.89	0.	0.	31.65	0.	0.
30 A	0.	0.	0.	40.67	37.89	0.	33.82	30.39	0.	0.
L	0.	0.	0.	40.67	0.	0.	33.82	29.34	0.	0.
R	0.	0.	0.	0.	33.39	0.	0.	32.42	0.	0.
40 A	0.	0.	0.	40.65	33.39	0.	32.10	30.76	0.	0.
L	0.	0.	0.	40.65	0.	0.	32.10	28.96	0.	0.
R	0.	0.	0.	0.	32.28	0.	0.	32.34	0.	0.
50 A	0.	0.	0.	30.55	32.28	0.	30.60	30.99	0.	0.
L	0.	0.	0.	30.55	0.	0.	30.60	29.10	0.	0.
R	0.	0.	0.	0.	32.34	0.	0.	31.77	0.	0.
60 A	0.	0.	0.	35.27	32.34	0.	29.79	30.52	0.	0.
L	0.	0.	0.	35.27	0.	0.	29.79	29.05	0.	0.

RADIANCE VALUES ARE IN MICROWATTS. VA AND SA ARE IN DEGREES.

FIGURE 97

IR MEAN RADIANCE AS A FUNCTION OF SUN AZIMUTH

FILTER 9 AT 1119 AST						INSOL ANGLE 42.2 DEG				
SPECTRAL BAND 4.18 TO 4.97 MICRONS						ELEVATION 30.5 KM				
VA	0	10	20	30	40	50	60	70	80	90
SA										
R	0.	0.	0.	0.	38.70	0.	0.	31.93	0.	0.
70 A	0.	0.	0.	33.72	38.70	0.	30.58	30.50	0.	0.
L	0.	0.	0.	33.72	0.	0.	30.58	29.31	0.	0.
R	0.	0.	0.	0.	30.07	0.	0.	32.31	0.	0.
80 A	0.	0.	0.	45.76	30.07	0.	29.53	31.38	0.	0.
L	0.	0.	0.	45.76	0.	0.	29.53	30.45	0.	0.
R	0.	0.	0.	0.	37.63	0.	0.	31.94	0.	0.
90 A	0.	0.	0.	39.71	37.63	0.	29.14	31.57	0.	0.
L	0.	0.	0.	39.71	0.	0.	29.14	31.11	0.	0.
R	0.	0.	0.	0.	33.99	0.	0.	31.74	0.	0.
100 A	0.	0.	0.	40.87	33.99	0.	29.33	31.12	0.	0.
L	0.	0.	0.	40.87	0.	0.	29.33	30.44	0.	0.
R	0.	0.	0.	0.	33.91	0.	0.	31.94	0.	0.
110 A	0.	0.	0.	37.50	33.91	0.	29.59	31.38	0.	0.
L	0.	0.	0.	37.50	0.	0.	29.59	30.78	0.	0.
R	0.	0.	0.	0.	28.63	0.	0.	32.17	0.	0.
120 A	0.	0.	0.	30.31	28.63	0.	28.91	31.74	0.	0.
L	0.	0.	0.	30.31	0.	0.	28.91	31.24	0.	0.

RADIANCE VALUES ARE IN MICROWATTS. VA AND SA ARE IN DEGREES.

FIGURE 97 CONT.

IR MEAN RADIANCE AS A FUNCTION OF SUN AZIMUTH

FILTER 9 AT 1119 AST INSOL ANGLE 42.2 DEG
SPECTRAL BAND 4.18 TO 4.97 MICRONS ELEVATION 30.5 KM

	VA	0	10	20	30	40	50	60	70	80	90
SA											
	R	0.	0.	0.	0.	39.47	0.	0.	31.94	0.	0.
130	A	0.	0.	0.	32.18	39.47	0.	29.53	31.73	0.	0.
	L	0.	0.	0.	32.18	0.	0.	29.53	31.48	0.	0.
	R	0.	0.	0.	0.	33.80	0.	0.	31.78	0.	0.
140	A	0.	0.	0.	39.33	33.80	0.	29.68	31.09	0.	0.
	L	0.	0.	0.	39.33	0.	0.	29.68	30.74	0.	0.
	R	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
150	A	0.	0.	0.	30.24	0.	0.	28.79	31.32	0.	0.
	L	0.	0.	0.	30.24	0.	0.	28.79	31.32	0.	0.
	R	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
160	A	0.	0.	0.	0.	0.	0.	0.	30.82	0.	0.
	L	0.	0.	0.	0.	0.	0.	0.	30.82	0.	0.
	R	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
170	A	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
	L	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
	R	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
180	A	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
	L	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.

RADIANCE VALUES ARE IN MICROWATTS. VA AND SA ARE IN DEGREES.

FIGURE 97 CONT.

IR RMS FLUCTUATION AS A FUNCTION OF SUN AZIMUTH

FILTER 9 AT 1119 AST INSOL ANGLE 42.2 DEG
SPECTRAL BAND 4.18 TO 4.97 MICRONS ELEVATION 30.5 KM

VA	0	10	20	30	40	50	60	70	80	90
SA										
R	0.	0.	0.	0.	1.13	0.	0.	0.97	0.	0.
0 A	0.	0.	0.	0.	1.33	0.	0.	1.40	0.	0.
L	0.	0.	0.	0.	0.71	0.	0.	1.02	0.	0.
R	0.	0.	0.	0.	1.38	0.	0.	1.13	0.	0.
10 A	0.	0.	0.	1.93	1.38	0.	1.01	1.56	0.	0.
L	0.	0.	0.	1.93	0.	0.	1.01	1.07	0.	0.
R	0.	0.	0.	0.	1.66	0.	0.	0.96	0.	0.
20 A	0.	0.	0.	1.82	1.66	0.	2.42	1.47	0.	0.
L	0.	0.	0.	1.82	0.	0.	2.42	1.12	0.	0.
R	0.	0.	0.	0.	2.61	0.	0.	0.92	0.	0.
30 A	0.	0.	0.	3.45	2.61	0.	1.39	1.34	0.	0.
L	0.	0.	0.	3.45	0.	0.	1.39	0.98	0.	0.
R	0.	0.	0.	0.	1.54	0.	0.	0.92	0.	0.
40 A	0.	0.	0.	2.28	1.54	0.	1.58	1.37	0.	0.
L	0.	0.	0.	2.28	0.	0.	1.58	1.01	0.	0.
R	0.	0.	0.	0.	1.73	0.	0.	0.93	0.	0.
50 A	0.	0.	0.	2.97	1.73	0.	1.56	1.42	0.	0.
L	0.	0.	0.	2.97	0.	0.	1.56	1.07	0.	0.
R	0.	0.	0.	0.	4.33	0.	0.	0.97	0.	0.
60 A	0.	0.	0.	2.36	4.33	0.	1.37	1.42	0.	0.
L	0.	0.	0.	2.36	0.	0.	1.37	1.03	0.	0.

RADIANCE VALUES ARE IN MICROWATTS. VA AND SA ARE IN DEGREES.

FIGURE 98

IR RMS FLUCTUATION AS A FUNCTION OF SUN AZIMUTH

FILTER 9 AT 1119 AST INSOL ANGLE 42.2 DEG
SPECTRAL BAND 4.18 TO 4.97 MICRONS ELEVATION 30.5 KM

VA	0	10	20	30	40	50	60	70	80	90
SA										
R	0.	0.	0.	0.	1.61	0.	0.	0.91	0.	0.
70 A	0.	0.	0.	6.10	1.61	0.	1.52	1.39	0.	0.
L	0.	0.	0.	6.10	0.	0.	1.52	1.05	0.	0.
R	0.	0.	0.	0.	2.24	0.	0.	0.96	0.	0.
80 A	0.	0.	0.	1.81	2.24	0.	1.35	1.41	0.	0.
L	0.	0.	0.	1.81	0.	0.	1.35	1.03	0.	0.
R	0.	0.	0.	0.	1.38	0.	0.	0.98	0.	0.
90 A	0.	0.	0.	1.53	1.38	0.	1.13	1.41	0.	0.
L	0.	0.	0.	1.53	0.	0.	1.13	1.02	0.	0.
R	0.	0.	0.	0.	2.27	0.	0.	0.95	0.	0.
100 A	0.	0.	0.	1.58	2.27	0.	1.07	1.47	0.	0.
L	0.	0.	0.	1.58	0.	0.	1.07	1.11	0.	0.
R	0.	0.	0.	0.	3.55	0.	0.	0.95	0.	0.
110 A	0.	0.	0.	6.63	3.55	0.	1.12	1.41	0.	0.
L	0.	0.	0.	6.63	0.	0.	1.12	1.05	0.	0.
R	0.	0.	0.	0.	1.12	0.	0.	0.94	0.	0.
120 A	0.	0.	0.	0.99	1.12	0.	1.03	1.37	0.	0.
L	0.	0.	0.	0.99	0.	0.	1.03	0.99	0.	0.

RADIANCE VALUES ARE IN MICROWATTS. VA AND SA ARE IN DEGREES.

FIGURE 98 CONT.

IR RMS FLUCTUATION AS A FUNCTION OF SUN AZIMUTH

FILTER 9 AT 1119 AST INSOL ANGLE 42.2 DEG
SPECTRAL BAND 4.18 TO 4.97 MICRONS ELEVATION 30.5 KM

	VA	0	10	20	30	40	50	60	70	80	90
SA											
	R	0.	0.	0.	0.	6.40	0.	0.	0.93	0.	0.
130	A	0.	0.	0.	3.48	6.40	0.	1.36	1.35	0.	0.
	L	0.	0.	0.	3.48	0.	0.	1.36	0.98	0.	0.
	R	0.	0.	0.	0.	1.70	0.	0.	0.92	0.	0.
140	A	0.	0.	0.	5.75	1.70	0.	1.33	1.35	0.	0.
	L	0.	0.	0.	5.75	0.	0.	1.33	0.99	0.	0.
	R	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
150	A	0.	0.	0.	1.41	0.	0.	0.99	0.99	0.	0.
	L	0.	0.	0.	1.41	0.	0.	0.99	0.99	0.	0.
	R	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
160	A	0.	0.	0.	0.	0.	0.	0.	1.48	0.	0.
	L	0.	0.	0.	0.	0.	0.	0.	1.48	0.	0.
	R	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
170	A	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
	L	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
	R	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
180	A	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
	L	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.

RADIANCE VALUES ARE IN MICROWATTS. VA AND SA ARE IN DEGREES.

FIGURE 98 CONT.

IR NUMBER OF OBSERVATIONS AS A FUNCTION OF SCATTERING ANGLE

FILTER 9 AT 1119 AST INSOL ANGLE 42.2 DEG
SPECTRAL BAND 4.18 TO 4.97 MICRONS ELEVATION 30.5 KM

SA	VA	0	10	20	30	40	50	60	70	80	90
0		0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
10		0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
20		0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
30		0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
40		0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
50		0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
60		0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
70		0.	0.	0.	0.	0.	0.	0.	1350.	0.	0.
80		0.	0.	0.	0.	0.	0.	480.	750.	0.	0.
90		0.	0.	0.	0.	359.	0.	435.	568.	0.	0.
100		0.	0.	0.	15.	645.	0.	330.	585.	0.	0.
110		0.	0.	0.	735.	390.	0.	270.	585.	0.	0.
120		0.	0.	0.	600.	330.	0.	315.	570.	0.	0.
130		0.	0.	0.	480.	330.	0.	285.	570.	0.	0.
140		0.	0.	0.	314.	285.	0.	270.	329.	0.	0.
150		0.	0.	0.	450.	225.	0.	195.	0.	0.	0.
160		0.	0.	0.	180.	0.	0.	0.	0.	0.	0.
170		0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
180		0.	0.	0.	0.	0.	0.	0.	0.	0.	0.

RADIANCE VALUES ARE IN MICROWATTS. VA AND SA ARE IN DEGREES.

FIGURE 99

IR MEAN RADIANCE AS A FUNCTION OF SCATTERING ANGLE

FILTER 9 AT 1119 AST INSOL ANGLE 42.2 DEG
SPECTRAL BAND 4.18 TO 4.97 MICRONS ELEVATION 30.5 KM

VA	0	10	20	30	40	50	60	70	80	90
SA										
0	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
10	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
20	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
30	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
40	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
50	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
60	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
70	0.	0.	0.	0.	0.	0.	0.	30.28	0.	0.
80	0.	0.	0.	0.	0.	0.	33.58	30.82	0.	0.
90	0.	0.	0.	0.	37.66	0.	30.99	30.67	0.	0.
100	0.	0.	0.	41.15	35.41	0.	30.05	31.46	0.	0.
110	0.	0.	0.	38.39	34.99	0.	29.54	31.17	0.	0.
120	0.	0.	0.	34.39	34.15	0.	29.51	31.65	0.	0.
130	0.	0.	0.	41.57	34.50	0.	29.07	31.69	0.	0.
140	0.	0.	0.	36.39	29.54	0.	29.50	31.11	0.	0.
150	0.	0.	0.	34.98	38.86	0.	29.28	0.	0.	0.
160	0.	0.	0.	30.14	0.	0.	0.	0.	0.	0.
170	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
180	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.

RADIANCE VALUES ARE IN MICROWATTS. VA AND SA ARE IN DEGREES.

FIGURE 100

IR RMS FLUCTUATION AS A FUNCTION OF SCATTERING ANGLE

FILTER 9 AT 1119 AST INSOL ANGLE 42.2 DEG
SPECTRAL BAND 4.18 TO 4.97 MICRONS ELEVATION 30.5 KM

SA	VA	0	10	20	30	40	50	60	70	80	90
0	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
10	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
20	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
30	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
40	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
50	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
60	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
70	0.	0.	0.	0.	0.	0.	0.	0.	1.43	0.	0.
80	0.	0.	0.	0.	0.	0.	0.	1.93	1.85	0.	0.
90	0.	0.	0.	0.	1.75	0.	1.81	1.70	0.	0.	0.
100	0.	0.	0.	3.54	3.32	0.	1.56	1.26	0.	0.	0.
110	0.	0.	0.	3.71	4.59	0.	1.29	1.18	0.	0.	0.
120	0.	0.	0.	5.74	4.15	0.	1.09	1.09	0.	0.	0.
130	0.	0.	0.	3.04	2.60	0.	1.09	1.00	0.	0.	0.
140	0.	0.	0.	6.17	2.53	0.	1.36	1.08	0.	0.	0.
150	0.	0.	0.	5.85	5.95	0.	1.22	0.	0.	0.	0.
160	0.	0.	0.	1.39	0.	0.	0.	0.	0.	0.	0.
170	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
180	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.

RADIANCE VALUES ARE IN MICROWATTS. VA AND SA ARE IN DEGREES.

FIGURE 101

IR NUMBER OF OBSERVATIONS AS A FUNCTION OF SUN AZIMUTH

FILTER 7 AT 1125 AST INSOL ANGLE 42.1 DEG
SPECTRAL BAND 2.54 TO 2.89 MICRONS ELEVATION 30.5 KM

VA SA	0	10	20	30	40	50	60	70	80	90
R	0.	0.	0.	0.	119.	0.	0.	75.	0.	0.
0 A	0.	0.	0.	0.	105.	0.	0.	83.	0.	0.
L	0.	0.	0.	0.	90.	0.	0.	90.	0.	0.
R	0.	0.	0.	0.	224.	0.	0.	180.	0.	0.
10 A	0.	0.	0.	8.	120.	0.	0.	113.	0.	0.
L	0.	0.	0.	15.	15.	0.	0.	45.	0.	0.
R	0.	0.	0.	0.	148.	0.	0.	163.	0.	0.
20 A	0.	0.	0.	105.	74.	0.	0.	187.	0.	0.
L	0.	0.	0.	210.	0.	0.	0.	210.	0.	0.
R	0.	0.	0.	0.	208.	0.	0.	195.	0.	0.
30 A	0.	0.	0.	98.	104.	0.	0.	195.	0.	0.
L	0.	0.	0.	195.	0.	0.	0.	194.	0.	0.
R	0.	0.	0.	0.	223.	0.	0.	165.	0.	0.
40 A	0.	0.	0.	89.	112.	0.	0.	180.	0.	0.
L	0.	0.	0.	178.	0.	0.	0.	195.	0.	0.
R	0.	0.	0.	0.	195.	0.	0.	165.	0.	0.
50 A	0.	0.	0.	80.	98.	0.	0.	188.	0.	0.
L	0.	0.	0.	160.	0.	0.	0.	210.	0.	0.
R	0.	0.	0.	0.	224.	0.	0.	134.	0.	0.
60 A	0.	0.	0.	74.	112.	0.	0.	165.	0.	0.
L	0.	0.	0.	147.	0.	0.	0.	195.	0.	0.

RADIANCE VALUES ARE IN MICROWATTS. VA AND SA ARE IN DEGREES.

FIGURE 102

IR NUMBER OF OBSERVATIONS AS A FUNCTION OF SUN AZIMUTH

FILTER 7 AT 1125 AST INSOL ANGLE 42.1 DEG
SPECTRAL BAND 2.54 TO 2.89 MICRONS ELEVATION 30.5 KM

VA	0	10	20	30	40	50	60	70	80	90
SA										
R	0.	0.	0.	0.	210.	0.	0.	239.	0.	0.
70 A	0.	0.	0.	119.	105.	0.	0.	232.	0.	0.
L	0.	0.	0.	237.	0.	0.	0.	224.	0.	0.
R	0.	0.	0.	0.	149.	0.	0.	195.	0.	0.
80 A	0.	0.	0.	83.	75.	0.	0.	203.	0.	0.
L	0.	0.	0.	165.	0.	0.	0.	210.	0.	0.
R	0.	0.	0.	0.	149.	0.	0.	149.	0.	0.
90 A	0.	0.	0.	105.	75.	0.	0.	172.	0.	0.
L	0.	0.	0.	210.	0.	0.	0.	195.	0.	0.
R	0.	0.	0.	0.	195.	0.	0.	209.	0.	0.
100 A	0.	0.	0.	82.	98.	0.	0.	225.	0.	0.
L	0.	0.	0.	164.	0.	0.	0.	240.	0.	0.
R	0.	0.	0.	0.	180.	0.	0.	222.	0.	0.
110 A	0.	0.	0.	90.	90.	0.	0.	194.	0.	0.
L	0.	0.	0.	180.	0.	0.	0.	165.	0.	0.
R	0.	0.	0.	0.	134.	0.	0.	120.	0.	0.
120 A	0.	0.	0.	90.	67.	0.	0.	165.	0.	0.
L	0.	0.	0.	180.	0.	0.	0.	210.	0.	0.

RADIANCE VALUES ARE IN MICROWATTS. VA AND SA ARE IN DEGREES.

FIGURE 102 CONT.

IR NUMBER OF OBSERVATIONS AS A FUNCTION OF SUN AZIMUTH

FILTER 7 AT 1125 AST INSOL ANGLE 42.1 DEG
SPECTRAL BAND 2.54 TO 2.89 MICRONS ELEVATION 30.5 KM

	VA	0	10	20	30	40	50	60	70	80	90
SA											
R		0.	0.	0.	0.	75.	0.	0.	210.	0.	0.
130 A		0.	0.	0.	105.	38.	0.	0.	218.	0.	0.
L		0.	0.	0.	210.	0.	0.	0.	225.	0.	0.
R		0.	0.	0.	0.	0.	0.	0.	45.	0.	0.
140 A		0.	0.	0.	75.	0.	0.	0.	135.	0.	0.
L		0.	0.	0.	150.	0.	0.	0.	225.	0.	0.
R		0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
150 A		0.	0.	0.	90.	0.	0.	0.	75.	0.	0.
L		0.	0.	0.	180.	0.	0.	0.	150.	0.	0.
R		0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
160 A		0.	0.	0.	8.	0.	0.	0.	0.	0.	0.
L		0.	0.	0.	15.	0.	0.	0.	0.	0.	0.
R		0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
170 A		0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
L		0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
R		0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
180 A		0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
L		0.	0.	0.	0.	0.	0.	0.	0.	0.	0.

RADIANCE VALUES ARE IN MICROWATTS. VA AND SA ARE IN DEGREES.

FIGURE 102 CONT.

IR MEAN RADIANCE AS A FUNCTION OF SUN AZIMUTH

FILTER 7 AT 1125 AST INSOL ANGLE 42.1 DEG
SPECTRAL BAND 2.54 TO 2.89 MICRONS ELEVATION 30.5 KM

VA	0	10	20	30	40	50	60	70	80	90
SA										
R	0.	0.	0.	0.	0.19	0.	0.	0.16	0.	0.
0 A	0.	0.	0.	0.	0.18	0.	0.	0.18	0.	0.
L	0.	0.	0.	0.	0.17	0.	0.	0.19	0.	0.
R	0.	0.	0.	0.	0.19	0.	0.	0.19	0.	0.
10 A	0.	0.	0.	0.20	0.19	0.	0.	0.19	0.	0.
L	0.	0.	0.	0.20	0.17	0.	0.	0.18	0.	0.
R	0.	0.	0.	0.	0.22	0.	0.	0.18	0.	0.
20 A	0.	0.	0.	0.16	0.22	0.	0.	0.18	0.	0.
L	0.	0.	0.	0.16	0.	0.	0.	0.13	0.	0.
R	0.	0.	0.	0.	0.19	0.	0.	0.16	0.	0.
30 A	0.	0.	0.	0.18	0.19	0.	0.	0.18	0.	0.
L	0.	0.	0.	0.18	0.	0.	0.	0.20	0.	0.
R	0.	0.	0.	0.	0.18	0.	0.	0.17	0.	0.
40 A	0.	0.	0.	0.18	0.18	0.	0.	0.18	0.	0.
L	0.	0.	0.	0.18	0.	0.	0.	0.18	0.	0.
R	0.	0.	0.	0.	0.18	0.	0.	0.18	0.	0.
50 A	0.	0.	0.	0.20	0.18	0.	0.	0.20	0.	0.
L	0.	0.	0.	0.20	0.	0.	0.	0.22	0.	0.
R	0.	0.	0.	0.	0.18	0.	0.	0.19	0.	0.
60 A	0.	0.	0.	0.18	0.18	0.	0.	0.22	0.	0.
L	0.	0.	0.	0.18	0.	0.	0.	0.25	0.	0.

RADIANCE VALUES ARE IN MICROWATTS. VA AND SA ARE IN DEGREES.

FIGURE 103

IR MEAN RADIANCE AS A FUNCTION OF SUN AZIMUTH

FILTER 7 AT 1125 AST INSOL ANGLE 42.1 DEG
SPECTRAL BAND 2.54 TO 2.89 MICRONS ELEVATION 30.5 KM

VA	0	10	20	30	40	50	60	70	80	90
SA										
R	0.	0.	0.	0.	0.17	0.	0.	0.17	0.	0.
70 A	0.	0.	0.	0.18	0.17	0.	0.	0.20	0.	0.
L	0.	0.	0.	0.18	0.	0.	0.	0.22	0.	0.
R	0.	0.	0.	0.	0.19	0.	0.	0.19	0.	0.
80 A	0.	0.	0.	0.15	0.19	0.	0.	0.23	0.	0.
L	0.	0.	0.	0.15	0.	0.	0.	0.27	0.	0.
R	0.	0.	0.	0.	0.16	0.	0.	0.17	0.	0.
90 A	0.	0.	0.	0.16	0.16	0.	0.	0.20	0.	0.
L	0.	0.	0.	0.16	0.	0.	0.	0.23	0.	0.
R	0.	0.	0.	0.	0.16	0.	0.	0.16	0.	0.
100 A	0.	0.	0.	0.19	0.16	0.	0.	0.21	0.	0.
L	0.	0.	0.	0.19	0.	0.	0.	0.26	0.	0.
R	0.	0.	0.	0.	0.19	0.	0.	0.18	0.	0.
110 A	0.	0.	0.	0.17	0.19	0.	0.	0.18	0.	0.
L	0.	0.	0.	0.17	0.	0.	0.	0.19	0.	0.
R	0.	0.	0.	0.	0.16	0.	0.	0.19	0.	0.
120 A	0.	0.	0.	0.16	0.16	0.	0.	0.18	0.	0.
L	0.	0.	0.	0.16	0.	0.	0.	0.18	0.	0.

RADIANCE VALUES ARE IN MICROWATTS. VA AND SA ARE IN DEGREES.

FIGURE 103 CONT.

IR MEAN RADIANCE AS A FUNCTION OF SUN AZIMUTH

FILTER 7 AT 1125 AST INSOL ANGLE 42.1 DEG
SPECTRAL BAND 2.54 TO 2.89 MICRONS ELEVATION 30.5 KM

VA	0	10	20	30	40	50	60	70	80	90
SA										
R	0.	0.	0.	0.	0.20	0.	0.	0.17	0.	0.
130 A	0.	0.	0.	0.16	0.20	0.	0.	0.17	0.	0.
L	0.	0.	0.	0.16	0.	0.	0.	0.16	0.	0.
R	0.	0.	0.	0.	0.	0.	0.	0.16	0.	0.
140 A	0.	0.	0.	0.15	0.	0.	0.	0.17	0.	0.
L	0.	0.	0.	0.15	0.	0.	0.	0.17	0.	0.
R	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
150 A	0.	0.	0.	0.16	0.	0.	0.	0.16	0.	0.
L	0.	0.	0.	0.16	0.	0.	0.	0.16	0.	0.
R	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
160 A	0.	0.	0.	0.14	0.	0.	0.	0.	0.	0.
L	0.	0.	0.	0.14	0.	0.	0.	0.	0.	0.
R	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
170 A	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
L	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
R	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
180 A	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
L	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.

RADIANCE VALUES ARE IN MICROWATTS. VA AND SA ARE IN DEGREES.

FIGURE 103 CONT.

IR RMS FLUCTUATION AS A FUNCTION OF SUN AZIMUTH

FILTER 7 AT 1125 AST INSOL ANGLE 42.1 DEG
SPECTRAL BAND 2.54 TO 2.89 MICRONS ELEVATION 30.5 KM

VA	0	10	20	30	40	50	60	70	80	90
SA										
R	0.	0.	0.	0.	0.12	0.	0.	0.11	0.	0.
0 A	0.	0.	0.	0.	0.18	0.	0.	0.17	0.	0.
L	0.	0.	0.	0.	0.13	0.	0.	0.13	0.	0.
R	0.	0.	0.	0.	0.15	0.	0.	0.14	0.	0.
10 A	0.	0.	0.	0.18	0.19	0.	0.	0.20	0.	0.
L	0.	0.	0.	0.18	0.13	0.	0.	0.15	0.	0.
R	0.	0.	0.	0.	0.16	0.	0.	0.13	0.	0.
20 A	0.	0.	0.	0.12	0.16	0.	0.	0.19	0.	0.
L	0.	0.	0.	0.12	0.	0.	0.	0.13	0.	0.
R	0.	0.	0.	0.	0.14	0.	0.	0.12	0.	0.
30 A	0.	0.	0.	0.15	0.14	0.	0.	0.18	0.	0.
L	0.	0.	0.	0.15	0.	0.	0.	0.13	0.	0.
R	0.	0.	0.	0.	0.13	0.	0.	0.12	0.	0.
40 A	0.	0.	0.	0.14	0.13	0.	0.	0.19	0.	0.
L	0.	0.	0.	0.14	0.	0.	0.	0.14	0.	0.
R	0.	0.	0.	0.	0.15	0.	0.	0.14	0.	0.
50 A	0.	0.	0.	0.16	0.15	0.	0.	0.21	0.	0.
L	0.	0.	0.	0.16	0.	0.	0.	0.16	0.	0.
R	0.	0.	0.	0.	0.12	0.	0.	0.14	0.	0.
60 A	0.	0.	0.	0.15	0.12	0.	0.	0.21	0.	0.
L	0.	0.	0.	0.15	0.	0.	0.	0.16	0.	0.

RADIANCE VALUES ARE IN MICROWATTS. VA AND SA ARE IN DEGREES.

FIGURE 104

IR RMS FLUCTUATION AS A FUNCTION OF SUN AZIMUTH

FILTER 7 AT 1125 AST INSOL ANGLE 42.1 DEG
SPECTRAL BAND 2.54 TO 2.89 MICRONS ELEVATION 30.5 KM

VA	0	10	20	30	40	50	60	70	80	90
SA										
R	0.	0.	0.	0.	0.13	0.	0.	0.13	0.	0.
70 A	0.	0.	0.	0.14	0.13	0.	0.	0.21	0.	0.
L	0.	0.	0.	0.14	0.	0.	0.	0.16	0.	0.
R	0.	0.	0.	0.	0.13	0.	0.	0.15	0.	0.
80 A	0.	0.	0.	0.12	0.13	0.	0.	0.22	0.	0.
L	0.	0.	0.	0.12	0.	0.	0.	0.17	0.	0.
R	0.	0.	0.	0.	0.13	0.	0.	0.13	0.	0.
90 A	0.	0.	0.	0.13	0.13	0.	0.	0.20	0.	0.
L	0.	0.	0.	0.13	0.	0.	0.	0.16	0.	0.
R	0.	0.	0.	0.	0.12	0.	0.	0.13	0.	0.
100 A	0.	0.	0.	0.14	0.12	0.	0.	0.21	0.	0.
L	0.	0.	0.	0.14	0.	0.	0.	0.17	0.	0.
R	0.	0.	0.	0.	0.15	0.	0.	0.14	0.	0.
110 A	0.	0.	0.	0.13	0.15	0.	0.	0.20	0.	0.
L	0.	0.	0.	0.13	0.	0.	0.	0.14	0.	0.
R	0.	0.	0.	0.	0.13	0.	0.	0.15	0.	0.
120 A	0.	0.	0.	0.12	0.13	0.	0.	0.20	0.	0.
L	0.	0.	0.	0.12	0.	0.	0.	0.14	0.	0.

RADIANCE VALUES ARE IN MICROWATTS. VA AND SA ARE IN DEGREES.

FIGURE 104 CONT.

IR RMS FLUCTUATION AS A FUNCTION OF SUN AZIMUTH

FILTER 7 AT 1125 AST INSOL ANGLE 42.1 DEG
SPECTRAL BAND 2.54 TO 2.89 MICRONS ELEVATION 30.5 KM

VA SA	0	10	20	30	40	50	60	70	80	90
R	0.	0.	0.	0.	0.15	0.	0.	0.13	0.	0.
130 A	0.	0.	0.	0.12	0.15	0.	0.	0.18	0.	0.
L	0.	0.	0.	0.12	0.	0.	0.	0.13	0.	0.
R	0.	0.	0.	0.	0.	0.	0.	0.13	0.	0.
140 A	0.	0.	0.	0.11	0.	0.	0.	0.19	0.	0.
L	0.	0.	0.	0.11	0.	0.	0.	0.14	0.	0.
R	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
150 A	0.	0.	0.	0.11	0.	0.	0.	0.12	0.	0.
L	0.	0.	0.	0.11	0.	0.	0.	0.12	0.	0.
R	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
160 A	0.	0.	0.	0.09	0.	0.	0.	0.	0.	0.
L	0.	0.	0.	0.09	0.	0.	0.	0.	0.	0.
R	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
170 A	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
L	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
R	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
180 A	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
L	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.

RADIANCE VALUES ARE IN MICROWATTS. VA AND SA ARE IN DEGREES.

FIGURE 104 CONT.

IR NUMBER OF OBSERVATIONS AS A FUNCTION OF SCATTERING ANGLE

FILTER 7 AT 1125 AST INSOL ANGLE 42.1 DEG
SPECTRAL BAND 2.54 TO 2.89 MICRONS ELEVATION 30.5 KM

VA	0	10	20	30	40	50	60	70	80	90
SA										
0	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
10	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
20	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
30	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
40	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
50	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
60	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
70	0.	0.	0.	0.	0.	0.	0.	1257.	0.	0.
80	0.	0.	0.	0.	0.	0.	0.	795.	0.	0.
90	0.	0.	0.	0.	463.	0.	0.	687.	0.	0.
100	0.	0.	0.	0.	714.	0.	0.	585.	0.	0.
110	0.	0.	0.	612.	494.	0.	0.	583.	0.	0.
120	0.	0.	0.	560.	283.	0.	0.	567.	0.	0.
130	0.	0.	0.	404.	315.	0.	0.	645.	0.	0.
140	0.	0.	0.	390.	194.	0.	0.	330.	0.	0.
150	0.	0.	0.	390.	75.	0.	0.	0.	0.	0.
160	0.	0.	0.	240.	0.	0.	0.	0.	0.	0.
170	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
180	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.

RADIANCE VALUES ARE IN MICROWATTS. VA AND SA ARE IN DEGREES.

FIGURE 105

IR MEAN RADIANCE AS A FUNCTION OF SCATTERING ANGLE

FILTER 7 AT 1125 AST INSOL ANGLE 42.1 DEG
SPECTRAL BAND 2.54 TO 2.89 MICRONS ELEVATION 30.5 KM

VA	0	10	20	30	40	50	60	70	80	90
SA										
0	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
10	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
20	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
30	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
40	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
50	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
60	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
70	0.	0.	0.	0.	0.	0.	0.	0.18	0.	0.
80	0.	0.	0.	0.	0.	0.	0.	0.20	0.	0.
90	0.	0.	0.	0.	0.19	0.	0.	0.21	0.	0.
100	0.	0.	0.	0.	0.19	0.	0.	0.21	0.	0.
110	0.	0.	0.	0.18	0.18	0.	0.	0.21	0.	0.
120	0.	0.	0.	0.18	0.17	0.	0.	0.18	0.	0.
130	0.	0.	0.	0.16	0.18	0.	0.	0.17	0.	0.
140	0.	0.	0.	0.17	0.16	0.	0.	0.17	0.	0.
150	0.	0.	0.	0.15	0.20	0.	0.	0.	0.	0.
160	0.	0.	0.	0.16	0.	0.	0.	0.	0.	0.
170	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
180	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.

RADIANCE VALUES ARE IN MICROWATTS. VA AND SA ARE IN DEGREES.

FIGURE 106

IR RMS FLUCTUATION AS A FUNCTION OF SCATTERING ANGLE

FILTER 7 AT 1125 AST INSOL ANGLE 42.1 DEG
SPECTRAL BAND 2.54 TO 2.89 MICRONS ELEVATION 30.5 KM

VA	0	10	20	30	40	50	60	70	80	90
SA										
0	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
10	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
20	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
30	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
40	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
50	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
60	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
70	0.	0.	0.	0.	0.	0.	0.	0.13	0.	0.
80	0.	0.	0.	0.	0.	0.	0.	0.15	0.	0.
90	0.	0.	0.	0.	0.14	0.	0.	0.15	0.	0.
100	0.	0.	0.	0.	0.14	0.	0.	0.16	0.	0.
110	0.	0.	0.	0.14	0.13	0.	0.	0.16	0.	0.
120	0.	0.	0.	0.15	0.13	0.	0.	0.14	0.	0.
130	0.	0.	0.	0.13	0.14	0.	0.	0.13	0.	0.
140	0.	0.	0.	0.13	0.14	0.	0.	0.13	0.	0.
150	0.	0.	0.	0.12	0.15	0.	0.	0.	0.	0.
160	0.	0.	0.	0.11	0.	0.	0.	0.	0.	0.
170	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
180	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.

RADIANCE VALUES ARE IN MICROWATTS. VA AND SA ARE IN DEGREES.

FIGURE 107

IR NUMBER OF OBSERVATIONS AS A FUNCTION OF SUN AZIMUTH

FILTER 6 AT 1129 AST INSOL ANGLE 42.0 DEG
SPECTRAL BAND 2.50 TO 2.78 MICRONS ELEVATION 30.5 KM

VA	0	10	20	30	40	50	60	70	80	90
SA										
R	0.	0.	0.	90.	0.	0.	120.	90.	0.	0.
0 A	0.	0.	0.	90.	0.	0.	98.	83.	0.	0.
L	0.	0.	0.	90.	0.	0.	75.	75.	0.	0.
R	0.	0.	0.	240.	0.	0.	165.	240.	0.	0.
10 A	0.	0.	0.	120.	0.	0.	105.	165.	0.	0.
L	0.	0.	0.	0.	0.	0.	45.	90.	0.	0.
R	0.	0.	43.	120.	0.	0.	195.	195.	0.	0.
20 A	0.	0.	22.	60.	0.	0.	98.	188.	0.	0.
L	0.	0.	0.	0.	0.	0.	0.	180.	0.	0.
R	0.	0.	0.	165.	0.	0.	195.	210.	0.	0.
30 A	0.	0.	0.	83.	0.	0.	98.	218.	0.	0.
L	0.	0.	0.	0.	0.	0.	0.	225.	0.	0.
R	0.	0.	0.	210.	0.	0.	179.	165.	0.	0.
40 A	0.	0.	0.	105.	0.	52.	90.	187.	0.	0.
L	0.	0.	0.	0.	0.	104.	0.	209.	0.	0.
R	0.	0.	0.	240.	0.	0.	191.	210.	0.	0.
50 A	0.	0.	0.	120.	0.	90.	96.	180.	0.	0.
L	0.	0.	0.	0.	0.	179.	0.	150.	0.	0.
R	0.	0.	0.	210.	0.	0.	195.	180.	0.	0.
60 A	0.	0.	0.	105.	0.	98.	98.	195.	0.	0.
L	0.	0.	0.	0.	0.	195.	0.	210.	0.	0.

RADIANCE VALUES ARE IN MICROWATTS. VA AND SA ARE IN DEGREES.

FIGURE 108

IR NUMBER OF OBSERVATIONS AS A FUNCTION OF SUN AZIMUTH

FILTER 6 AT 1129 AST INSOL ANGLE 42.0 DEG
SPECTRAL BAND 2.50 TO 2.78 MICRONS ELEVATION 30.5 KM

VA	0	10	20	30	40	50	60	70	80	90
SA										
R	0.	0.	0.	195.	0.	0.	179.	135.	0.	0.
70 A	0.	0.	0.	98.	0.	83.	90.	165.	0.	0.
L	0.	0.	0.	0.	0.	165.	0.	195.	0.	0.
R	0.	0.	0.	135.	0.	0.	164.	180.	0.	0.
80 A	0.	0.	0.	68.	0.	98.	82.	210.	0.	0.
L	0.	0.	0.	0.	0.	195.	0.	240.	0.	0.
R	0.	0.	0.	209.	0.	0.	179.	165.	0.	0.
90 A	0.	0.	0.	105.	0.	90.	90.	188.	0.	0.
L	0.	0.	0.	0.	0.	180.	0.	210.	0.	0.
R	0.	0.	0.	180.	0.	0.	150.	210.	0.	0.
100 A	0.	0.	0.	90.	0.	83.	75.	210.	0.	0.
L	0.	0.	0.	0.	0.	165.	0.	210.	0.	0.
R	0.	0.	0.	180.	0.	15.	120.	150.	0.	0.
110 A	0.	0.	0.	90.	0.	98.	60.	135.	0.	0.
L	0.	0.	0.	0.	0.	180.	0.	119.	0.	0.
R	0.	0.	0.	135.	0.	0.	60.	210.	0.	0.
120 A	0.	0.	0.	68.	0.	98.	30.	195.	0.	0.
L	0.	0.	0.	0.	0.	195.	0.	180.	0.	0.

RADIANCE VALUES ARE IN MICROWATTS. VA AND SA ARE IN DEGREES.

FIGURE 108 CONT.

IR NUMBER OF OBSERVATIONS AS A FUNCTION OF SUN AZIMUTH

FILTER 6 AT 1129 AST						INSOL ANGLE 42.0 DEG				
SPECTRAL BAND 2.50 TO 2.78 MICRONS						ELEVATION 30.5 KM				
VA	0	10	20	30	40	50	60	70	80	90
SA										
R	0.	0.	0.	165.	0.	0.	135.	208.	0.	0.
130 A	0.	0.	0.	83.	0.	90.	68.	217.	0.	0.
L	0.	0.	0.	0.	0.	180.	0.	225.	0.	0.
R	0.	0.	0.	60.	0.	0.	0.	60.	0.	0.
140 A	0.	0.	0.	30.	0.	83.	0.	120.	0.	0.
L	0.	0.	0.	0.	0.	165.	0.	180.	0.	0.
R	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
150 A	0.	0.	0.	0.	0.	105.	0.	68.	0.	0.
L	0.	0.	0.	0.	0.	209.	0.	135.	0.	0.
R	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
160 A	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
L	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
R	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
170 A	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
L	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
R	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
180 A	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
L	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.

RADIANCE VALUES ARE IN MICROWATTS. VA AND SA ARE IN DEGREES.

FIGURE 108 CONT.

IR MEAN RADIANCE AS A FUNCTION OF SUN AZIMUTH

FILTER 6 AT 1129 AST INSOL ANGLE 42.0 DEG
SPECTRAL BAND 2.50 TO 2.78 MICRONS ELEVATION 30.5 KM

VA	0	10	20	30	40	50	60	70	80	90
SA										
R	0.	0.	0.	0.19	0.	0.	0.45	0.32	0.	0.
0 A	0.	0.	0.	0.18	0.	0.	0.46	0.48	0.	0.
L	0.	0.	0.	0.18	0.	0.	0.46	0.68	0.	0.
R	0.	0.	0.	0.19	0.	0.	0.22	0.37	0.	0.
10 A	0.	0.	0.	0.19	0.	0.	0.28	0.39	0.	0.
L	0.	0.	0.	0.	0.	0.	0.49	0.46	0.	0.
R	0.	0.	0.20	0.18	0.	0.	0.19	0.30	0.	0.
20 A	0.	0.	0.20	0.18	0.	0.	0.19	0.44	0.	0.
L	0.	0.	0.	0.	0.	0.	0.	0.60	0.	0.
R	0.	0.	0.	0.17	0.	0.	0.26	0.38	0.	0.
30 A	0.	0.	0.	0.17	0.	0.	0.26	0.49	0.	0.
L	0.	0.	0.	0.	0.	0.	0.	0.58	0.	0.
R	0.	0.	0.	0.17	0.	0.	0.17	0.44	0.	0.
40 A	0.	0.	0.	0.17	0.	0.19	0.17	0.81	0.	0.
L	0.	0.	0.	0.	0.	0.19	0.	1.10	0.	0.
R	0.	0.	0.	0.17	0.	0.	0.19	0.37	0.	0.
50 A	0.	0.	0.	0.17	0.	0.31	0.19	0.73	0.	0.
L	0.	0.	0.	0.	0.	0.31	0.	1.23	0.	0.
R	0.	0.	0.	0.18	0.	0.	0.17	0.42	0.	0.
60 A	0.	0.	0.	0.18	0.	0.18	0.17	0.68	0.	0.
L	0.	0.	0.	0.	0.	0.18	0.	0.90	0.	0.

RADIANCE VALUES ARE IN MICROWATTS. VA AND SA ARE IN DEGREES.

IR MEAN RADIANCE AS A FUNCTION OF SUN AZIMUTH

FILTER 6 AT 1129 AST INSOL ANGLE 42.0 DEG
SPECTRAL BAND 2.50 TO 2.78 MICRONS ELEVATION 30.5 KM

VA	0	10	20	30	40	50	60	70	80	90
SA										
R	0.	0.	0.	0.19	0.	0.	0.18	0.44	0.	0.
70 A	0.	0.	0.	0.19	0.	0.20	0.18	0.46	0.	0.
L	0.	0.	0.	0.	0.	0.20	0.	0.48	0.	0.
R	0.	0.	0.	0.18	0.	0.	0.18	0.35	0.	0.
80 A	0.	0.	0.	0.18	0.	0.66	0.18	0.63	0.	0.
L	0.	0.	0.	0.	0.	0.66	0.	0.85	0.	0.
R	0.	0.	0.	0.18	0.	0.	0.17	0.48	0.	0.
90 A	0.	0.	0.	0.18	0.	0.19	0.17	0.78	0.	0.
L	0.	0.	0.	0.	0.	0.19	0.	1.02	0.	0.
R	0.	0.	0.	0.16	0.	0.	0.17	0.57	0.	0.
100 A	0.	0.	0.	0.16	0.	0.23	0.17	0.63	0.	0.
L	0.	0.	0.	0.	0.	0.23	0.	0.69	0.	0.
R	0.	0.	0.	0.19	0.	0.49	0.24	1.67	0.	0.
110 A	0.	0.	0.	0.19	0.	0.35	0.24	1.30	0.	0.
L	0.	0.	0.	0.	0.	0.34	0.	0.84	0.	0.
R	0.	0.	0.	0.17	0.	0.	1.02	2.60	0.	0.
120 A	0.	0.	0.	0.17	0.	0.33	1.02	2.28	0.	0.
L	0.	0.	0.	0.	0.	0.33	0.	1.90	0.	0.

RADIANCE VALUES ARE IN MICROWATTS. VA AND SA ARE IN DEGREES.

FIGURE 109 CONT.

IR MEAN RADIANCE AS A FUNCTION OF SUN AZIMUTH

FILTER 6 AT 1129 AST INSOL ANGLE 42.0 DEG
SPECTRAL BAND 2.50 TO 2.78 MICRONS ELEVATION 30.5 KM

VA	0	10	20	30	40	50	60	70	80	90
SA										
R	0.	0.	0.	0.18	0.	0.	0.36	5.22	0.	0.
130 A	0.	0.	0.	0.18	0.	0.96	0.36	3.42	0.	0.
L	0.	0.	0.	0.	0.	0.96	0.	1.75	0.	0.
R	0.	0.	0.	0.18	0.	0.	0.	4.02	0.	0.
140 A	0.	0.	0.	0.18	0.	0.28	0.	1.88	0.	0.
L	0.	0.	0.	0.	0.	0.28	0.	1.17	0.	0.
R	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
150 A	0.	0.	0.	0.	0.	0.21	0.	0.94	0.	0.
L	0.	0.	0.	0.	0.	0.21	0.	0.94	0.	0.
R	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
160 A	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
L	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
R	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
170 A	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
L	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
R	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
180 A	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
L	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.

RADIANCE VALUES ARE IN MICROWATTS. VA AND SA ARE IN DEGREES.

FIGURE 109 CONT.

IR RMS FLUCTUATION AS A FUNCTION OF SUN AZIMUTH

FILTER 6 AT 1129 AST INSOL ANGLE 42.0 DEG
SPECTRAL BAND 2.50 TO 2.78 MICRONS ELEVATION 30.5 KM

VA	0	10	20	30	40	50	60	70	80	90
SA										
R	0.	0.	0.	0.12	0.	0.	0.25	0.20	0.	0.
0 A	0.	0.	0.	0.18	0.	0.	0.34	0.39	0.	0.
L	0.	0.	0.	0.13	0.	0.	0.23	0.33	0.	0.
R	0.	0.	0.	0.14	0.	0.	0.17	0.21	0.	0.
10 A	0.	0.	0.	0.14	0.	0.	0.26	0.33	0.	0.
L	0.	0.	0.	0.	0.	0.	0.20	0.25	0.	0.
R	0.	0.	0.15	0.14	0.	0.	0.15	0.19	0.	0.
20 A	0.	0.	0.15	0.14	0.	0.	0.15	0.31	0.	0.
L	0.	0.	0.	0.	0.	0.	0.	0.25	0.	0.
R	0.	0.	0.	0.13	0.	0.	0.20	0.21	0.	0.
30 A	0.	0.	0.	0.13	0.	0.	0.20	0.33	0.	0.
L	0.	0.	0.	0.	0.	0.	0.	0.25	0.	0.
R	0.	0.	0.	0.13	0.	0.	0.14	0.27	0.	0.
40 A	0.	0.	0.	0.13	0.	0.14	0.14	0.37	0.	0.
L	0.	0.	0.	0.	0.	0.14	0.	0.25	0.	0.
R	0.	0.	0.	0.12	0.	0.	0.14	0.21	0.	0.
50 A	0.	0.	0.	0.12	0.	0.25	0.14	0.32	0.	0.
L	0.	0.	0.	0.	0.	0.25	0.	0.25	0.	0.
R	0.	0.	0.	0.13	0.	0.	0.13	0.24	0.	0.
60 A	0.	0.	0.	0.13	0.	0.13	0.13	0.38	0.	0.
L	0.	0.	0.	0.	0.	0.13	0.	0.30	0.	0.

RADIANCE VALUES ARE IN MICROWATTS. VA AND SA ARE IN DEGREES.

FIGURE 110

IR RMS FLUCTUATION AS A FUNCTION OF SUN AZIMUTH

FILTER 6 AT 1129 AST INSOL ANGLE 42.0 DEG
SPECTRAL BAND 2.50 TO 2.78 MICRONS ELEVATION 30.5 KM

VA	0	10	20	30	40	50	60	70	80	90
SA										
R	0.	0.	0.	0.13	0.	0.	0.14	0.23	0.	0.
70 A	0.	0.	0.	0.13	0.	0.15	0.14	0.33	0.	0.
L	0.	0.	0.	0.	0.	0.15	0.	0.25	0.	0.
R	0.	0.	0.	0.13	0.	0.	0.14	0.20	0.	0.
80 A	0.	0.	0.	0.13	0.	0.52	0.14	0.30	0.	0.
L	0.	0.	0.	0.	0.	0.52	0.	0.22	0.	0.
R	0.	0.	0.	0.14	0.	0.	0.12	0.27	0.	0.
90 A	0.	0.	0.	0.14	0.	0.14	0.12	0.37	0.	0.
L	0.	0.	0.	0.	0.	0.14	0.	0.25	0.	0.
R	0.	0.	0.	0.12	0.	0.	0.13	0.33	0.	0.
100 A	0.	0.	0.	0.12	0.	0.18	0.13	0.39	0.	0.
L	0.	0.	0.	0.	0.	0.18	0.	0.21	0.	0.
R	0.	0.	0.	0.13	0.	0.24	0.17	0.57	0.	0.
110 A	0.	0.	0.	0.13	0.	0.34	0.17	0.68	0.	0.
L	0.	0.	0.	0.	0.	0.23	0.	0.36	0.	0.
R	0.	0.	0.	0.12	0.	0.	0.36	0.65	0.	0.
120 A	0.	0.	0.	0.12	0.	0.27	0.36	0.74	0.	0.
L	0.	0.	0.	0.	0.	0.27	0.	0.34	0.	0.

RADIANCE VALUES ARE IN MICROWATTS. VA AND SA ARE IN DEGREES.

FIGURE 110 CONT.

IR RMS FLUCTUATION AS A FUNCTION OF SUN AZIMUTH

FILTER 6 AT 1129 AST INSOL ANGLE 42.0 DEG
SPECTRAL BAND 2.50 TO 2.78 MICRONS ELEVATION 30.5 KM

VA	0	10	20	30	40	50	60	70	80	90
SA										
R	0.	0.	0.	0.14	0.	0.	0.26	0.92	0.	0.
130 A	0.	0.	0.	0.14	0.	0.77	0.26	1.03	0.	0.
L	0.	0.	0.	0.	0.	0.77	0.	0.46	0.	0.
R	0.	0.	0.	0.13	0.	0.	0.	0.79	0.	0.
140 A	0.	0.	0.	0.13	0.	0.19	0.	0.83	0.	0.
L	0.	0.	0.	0.	0.	0.19	0.	0.25	0.	0.
R	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
150 A	0.	0.	0.	0.	0.	0.15	0.	0.40	0.	0.
L	0.	0.	0.	0.	0.	0.15	0.	0.40	0.	0.
R	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
160 A	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
L	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
R	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
170 A	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
L	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
R	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
180 A	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
L	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.

RADIANCE VALUES ARE IN MICROWATTS. VA AND SA ARE IN DEGREES.

FIGURE 110 CONT.

IR NUMBER OF OBSERVATIONS AS A FUNCTION OF SCATTERING ANGLE

FILTER 6 AT 1129 AST INSOL ANGLE 42.0 DEG
SPECTRAL BAND 2.50 TO 2.78 MICRONS ELEVATION 30.5 KM

VA SA	0	10	20	30	40	50	60	70	80	90
0	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
10	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
20	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
30	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
40	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
50	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
60	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
70	0.	0.	0.	0.	0.	0.	0.	1424.	0.	0.
80	0.	0.	0.	0.	0.	0.	660.	810.	0.	0.
90	0.	0.	0.	0.	0.	0.	505.	600.	0.	0.
100	0.	0.	0.	0.	0.	403.	374.	645.	0.	0.
110	0.	0.	43.	795.	0.	330.	254.	525.	0.	0.
120	0.	0.	0.	735.	0.	360.	284.	569.	0.	0.
130	0.	0.	0.	434.	0.	285.	105.	598.	0.	0.
140	0.	0.	0.	405.	0.	270.	165.	270.	0.	0.
150	0.	0.	0.	255.	0.	285.	0.	0.	0.	0.
160	0.	0.	0.	0.	0.	194.	0.	0.	0.	0.
170	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
180	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.

RADIANCE VALUES ARE IN MICROWATTS. VA AND SA ARE IN DEGREES.

FIGURE 111

IR MEAN RADIANCE AS A FUNCTION OF SCATTERING ANGLE

FILTER 6 AT 1129 AST INSOL ANGLE 42.0 DEG
SPECTRAL BAND 2.50 TO 2.78 MICRONS ELEVATION 30.5 KM

VA SA	0	10	20	30	40	50	60	70	80	90
0	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
10	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
20	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
30	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
40	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
50	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
60	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
70	0.	0.	0.	0.	0.	0.	0.	0.48	0.	0.
80	0.	0.	0.	0.	0.	0.	0.32	0.77	0.	0.
90	0.	0.	0.	0.	0.	0.	0.19	0.51	0.	0.
100	0.	0.	0.	0.	0.	0.24	0.17	0.70	0.	0.
110	0.	0.	0.20	0.18	0.	0.37	0.18	0.65	0.	0.
120	0.	0.	0.	0.17	0.	0.28	0.17	1.80	0.	0.
130	0.	0.	0.	0.18	0.	0.33	0.52	3.22	0.	0.
140	0.	0.	0.	0.18	0.	0.60	0.45	1.21	0.	0.
150	0.	0.	0.	0.18	0.	0.44	0.	0.	0.	0.
160	0.	0.	0.	0.	0.	0.21	0.	0.	0.	0.
170	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
180	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.

RADIANCE VALUES ARE IN MICROWATTS. VA AND SA ARE IN DEGREES.

FIGURE 112

IR RMS FLUCTUATION AS A FUNCTION OF SCATTERING ANGLE

FILTER 6 AT 1129 AST INSOL ANGLE 42.0 DEG
SPECTRAL BAND 2.50 TO 2.78 MICRONS ELEVATION 30.5 KM

VA	0	10	20	30	40	50	60	70	80	90
SA										
0	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
10	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
20	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
30	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
40	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
50	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
60	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
70	0.	0.	0.	0.	0.	0.	0.	0.30	0.	0.
80	0.	0.	0.	0.	0.	0.	0.23	0.44	0.	0.
90	0.	0.	0.	0.	0.	0.	0.14	0.26	0.	0.
100	0.	0.	0.	0.	0.	0.20	0.13	0.37	0.	0.
110	0.	0.	0.15	0.14	0.	0.43	0.14	0.29	0.	0.
120	0.	0.	0.	0.13	0.	0.29	0.12	0.64	0.	0.
130	0.	0.	0.	0.13	0.	0.23	0.48	1.79	0.	0.
140	0.	0.	0.	0.13	0.	0.59	0.33	0.67	0.	0.
150	0.	0.	0.	0.13	0.	0.54	0.	0.	0.	0.
160	0.	0.	0.	0.	0.	0.15	0.	0.	0.	0.
170	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
180	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.

RADIANCE VALUES ARE IN MICROWATTS. VA AND SA ARE IN DEGREES.

FIGURE 113

IR NUMBER OF OBSERVATIONS AS A FUNCTION OF SUN AZIMUTH

FILTER 5 AT 1136 AST INSOL ANGLE 42.0 DEG
SPECTRAL BAND 1.57 TO 2.98 MICRONS ELEVATION 30.5 KM

VA	0	10	20	30	40	50	60	70	80	90
SA										
R	0.	0.	0.	75.	0.	0.	0.	105.	0.	0.
0 A	0.	0.	0.	98.	0.	0.	0.	97.	0.	0.
L	0.	0.	0.	120.	0.	0.	0.	88.	0.	0.
R	0.	0.	0.	225.	0.	0.	0.	195.	0.	0.
10 A	0.	0.	0.	150.	0.	0.	0.	157.	0.	0.
L	0.	0.	0.	75.	0.	0.	0.	119.	0.	0.
R	0.	0.	0.	195.	0.	0.	0.	225.	0.	0.
20 A	0.	0.	0.	98.	0.	60.	0.	210.	0.	0.
L	0.	0.	0.	0.	0.	120.	0.	195.	0.	0.
R	0.	0.	0.	195.	0.	0.	0.	180.	0.	0.
30 A	0.	0.	0.	98.	0.	90.	0.	180.	0.	0.
L	0.	0.	0.	0.	0.	180.	0.	180.	0.	0.
R	0.	0.	0.	195.	0.	0.	0.	225.	0.	0.
40 A	0.	0.	0.	98.	0.	120.	0.	203.	0.	0.
L	0.	0.	0.	0.	0.	239.	0.	180.	0.	0.
R	0.	0.	0.	210.	0.	0.	0.	195.	0.	0.
50 A	0.	0.	0.	105.	0.	83.	0.	180.	0.	0.
L	0.	0.	0.	0.	0.	165.	0.	165.	0.	0.
R	0.	0.	0.	195.	0.	0.	0.	150.	0.	0.
60 A	0.	0.	0.	98.	0.	98.	0.	158.	0.	0.
L	0.	0.	0.	0.	0.	195.	0.	165.	0.	0.

RADIANCE VALUES ARE IN MICROWATTS. VA AND SA ARE IN DEGREES.

FIGURE 114

IR NUMBER OF OBSERVATIONS AS A FUNCTION OF SUN AZIMUTH

FILTER 5 AT 1136 AST INSOL ANGLE 42.0 DEG
 SPECTRAL BAND 1.57 TO 2.98 MICRONS ELEVATION 30.5 KM

VA SA	0	10	20	30	40	50	60	70	80	90
R	0.	0.	0.	180.	0.	0.	0.	165.	0.	0.
70 A	0.	0.	0.	90.	0.	105.	0.	172.	0.	0.
L	0.	0.	0.	0.	0.	209.	0.	179.	0.	0.
R	0.	0.	0.	210.	0.	0.	0.	165.	0.	0.
80 A	0.	0.	0.	105.	0.	105.	0.	173.	0.	0.
L	0.	0.	0.	0.	0.	210.	0.	180.	0.	0.
R	0.	0.	0.	210.	0.	0.	0.	210.	0.	0.
90 A	0.	0.	0.	105.	0.	75.	0.	195.	0.	0.
L	0.	0.	0.	0.	0.	150.	0.	180.	0.	0.
R	0.	0.	0.	210.	0.	0.	0.	165.	0.	0.
100 A	0.	0.	0.	105.	0.	113.	0.	173.	0.	0.
L	0.	0.	0.	0.	0.	225.	0.	180.	0.	0.
R	0.	0.	15.	120.	0.	0.	0.	180.	0.	0.
110 A	0.	0.	8.	60.	0.	75.	0.	165.	0.	0.
L	0.	0.	0.	0.	0.	150.	0.	150.	0.	0.
R	0.	0.	0.	210.	0.	0.	0.	195.	0.	0.
120 A	0.	0.	0.	105.	0.	119.	0.	180.	0.	0.
L	0.	0.	0.	0.	0.	237.	0.	165.	0.	0.

RADIANCE VALUES ARE IN MICROWATTS. VA AND SA ARE IN DEGREES.

FIGURE 114 CONT.

IR NUMBER OF OBSERVATIONS AS A FUNCTION OF SUN AZIMUTH

FILTER 5 AT 1136 AST INSOL ANGLE 42.0 DEG
 SPECTRAL BAND 1.57 TO 2.98 MICRONS ELEVATION 30.5 KM

	VA	0	10	20	30	40	50	60	70	80	90
SA											
R		0.	0.	0.	180.	0.	0.	0.	165.	0.	0.
130 A		0.	0.	0.	90.	0.	113.	0.	173.	0.	0.
L		0.	0.	0.	0.	0.	225.	0.	180.	0.	0.
R		0.	0.	0.	30.	0.	0.	0.	0.	0.	0.
140 A		0.	0.	0.	15.	0.	83.	0.	83.	0.	0.
L		0.	0.	0.	0.	0.	165.	0.	165.	0.	0.
R		0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
150 A		0.	0.	0.	0.	0.	90.	0.	83.	0.	0.
L		0.	0.	0.	0.	0.	180.	0.	165.	0.	0.
R		0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
160 A		0.	0.	0.	0.	0.	15.	0.	30.	0.	0.
L		0.	0.	0.	0.	0.	30.	0.	60.	0.	0.
R		0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
170 A		0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
L		0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
R		0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
180 A		0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
L		0.	0.	0.	0.	0.	0.	0.	0.	0.	0.

RADIANCE VALUES ARE IN MICROWATTS. VA AND SA ARE IN DEGREES.

FIGURE 114 CONT.

IR MEAN RADIANCE AS A FUNCTION OF SUN AZIMUTH

FILTER 5 AT 1136 AST INSOL ANGLE 42.0 DEG
SPECTRAL BAND 1.57 TO 2.98 MICRONS ELEVATION 30.5 KM

VA	0	10	20	30	40	50	60	70	80	90
SA										
R	0.	0.	0.	28.86	0.	0.	0.	50.21	0.	0.
0 A	0.	0.	0.	31.06	0.	0.	0.	48.88	0.	0.
L	0.	0.	0.	32.43	0.	0.	0.	47.30	0.	0.
R	0.	0.	0.	33.46	0.	0.	0.	49.20	0.	0.
10 A	0.	0.	0.	33.62	0.	0.	0.	47.73	0.	0.
L	0.	0.	0.	34.09	0.	0.	0.	45.32	0.	0.
R	0.	0.	0.	33.35	0.	0.	0.	48.76	0.	0.
20 A	0.	0.	0.	33.35	0.	35.11	0.	48.59	0.	0.
L	0.	0.	0.	0.	0.	35.11	0.	48.39	0.	0.
R	0.	0.	0.	31.43	0.	0.	0.	49.01	0.	0.
30 A	0.	0.	0.	31.43	0.	27.56	0.	49.27	0.	0.
L	0.	0.	0.	0.	0.	27.56	0.	49.54	0.	0.
R	0.	0.	0.	32.98	0.	0.	0.	46.17	0.	0.
40 A	0.	0.	0.	32.98	0.	17.45	0.	46.10	0.	0.
L	0.	0.	0.	0.	0.	17.45	0.	46.01	0.	0.
R	0.	0.	0.	40.62	0.	0.	0.	46.41	0.	0.
50 A	0.	0.	0.	40.62	0.	12.00	0.	42.81	0.	0.
L	0.	0.	0.	0.	0.	12.00	0.	38.55	0.	0.
R	0.	0.	0.	35.38	0.	0.	0.	46.12	0.	0.
60 A	0.	0.	0.	35.38	0.	23.95	0.	42.58	0.	0.
L	0.	0.	0.	0.	0.	23.95	0.	39.37	0.	0.

RADIANCE VALUES ARE IN MICROWATTS. VA AND SA ARE IN DEGREES.

FIGURE 115

IR MEAN RADIANCE AS A FUNCTION OF SUN AZINUTH

FILTER 5 AT 1136 AST INSOL ANGLE 42.0 DEG
SPECTRAL BAND 1.57 TO 2.98 MICRONS ELEVATION 30.5 KM

VA	0	10	20	30	40	50	60	70	80	90
SA										
R	0.	0.	0.	33.97	0.	0.	0.	45.79	0.	0.
70 A	0.	0.	0.	33.97	0.	17.78	0.	41.20	0.	0.
L	0.	0.	0.	0.	0.	17.78	0.	36.97	0.	0.
R	0.	0.	0.	30.73	0.	0.	0.	46.35	0.	0.
80 A	0.	0.	0.	30.73	0.	16.88	0.	47.40	0.	0.
L	0.	0.	0.	0.	0.	16.88	0.	48.35	0.	0.
R	0.	0.	0.	31.01	0.	0.	0.	45.56	0.	0.
90 A	0.	0.	0.	31.01	0.	29.90	0.	46.13	0.	0.
L	0.	0.	0.	0.	0.	29.90	0.	46.79	0.	0.
R	0.	0.	0.	32.43	0.	0.	0.	47.10	0.	0.
100 A	0.	0.	0.	32.43	0.	21.80	0.	45.36	0.	0.
L	0.	0.	0.	0.	0.	21.80	0.	43.77	0.	0.
R	0.	0.	46.35	39.22	0.	0.	0.	47.52	0.	0.
110 A	0.	0.	46.35	39.22	0.	37.52	0.	45.49	0.	0.
L	0.	0.	0.	0.	0.	37.52	0.	43.04	0.	0.
R	0.	0.	0.	26.85	0.	0.	0.	41.97	0.	0.
120 A	0.	0.	0.	26.85	0.	38.24	0.	42.26	0.	0.
L	0.	0.	0.	0.	0.	38.24	0.	42.62	0.	0.

RADIANCE VALUES ARE IN MICROWATTS. VA AND SA ARE IN DEGREES.

FIGURE 115 CONT.

IR MEAN RADIANCE AS A FUNCTION OF SUN AZIMUTH

FILTER 5 AT 1136 AST INSOL ANGLE 42.0 DEG
SPECTRAL BAND 1.57 TO 2.98 MICRONS ELEVATION 30.5 KM

	VA	0	10	20	30	40	50	60	70	80	90
SA											
	R	0.	0.	0.	43.22	0.	0.	0.	42.08	0.	0.
130	A	0.	0.	0.	43.22	0.	28.80	0.	42.47	0.	0.
	L	0.	0.	0.	0.	0.	28.80	0.	42.83	0.	0.
	R	0.	0.	0.	51.09	0.	0.	0.	0.	0.	0.
140	A	0.	0.	0.	51.09	0.	46.47	0.	45.25	0.	0.
	L	0.	0.	0.	0.	0.	46.47	0.	45.25	0.	0.
	R	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
150	A	0.	0.	0.	0.	0.	46.83	0.	46.91	0.	0.
	L	0.	0.	0.	0.	0.	46.83	0.	46.91	0.	0.
	R	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
160	A	0.	0.	0.	0.	0.	34.78	0.	48.25	0.	0.
	L	0.	0.	0.	0.	0.	34.78	0.	48.25	0.	0.
	R	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
170	A	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
	L	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
	R	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
180	A	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
	L	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.

RADIANCE VALUES ARE IN MICROWATTS. VA AND SA ARE IN DEGREES.

FIGURE 115 CONT.

IR RMS FLUCTUATION AS A FUNCTION OF SUN AZINUTH

FILTER 5 AT 1136 AST INSOL ANGLE 42.0 DEG
SPECTRAL BAND 1.57 TO 2.98 MICRONS ELEVATION 30.5 KM

VA	0	10	20	30	40	50	60	70	80	90
SA										
R	0.	0.	0.	0.78	0.	0.	0.	1.98	0.	0.
0 A	0.	0.	0.	4.24	0.	0.	0.	3.37	0.	0.
L	0.	0.	0.	4.17	0.	0.	0.	2.73	0.	0.
R	0.	0.	0.	1.76	0.	0.	0.	2.06	0.	0.
10 A	0.	0.	0.	3.53	0.	0.	0.	3.15	0.	0.
L	0.	0.	0.	3.06	0.	0.	0.	2.39	0.	0.
R	0.	0.	0.	1.76	0.	0.	0.	1.57	0.	0.
20 A	0.	0.	0.	1.76	0.	5.07	0.	4.18	0.	0.
L	0.	0.	0.	0.	0.	5.07	0.	3.87	0.	0.
R	0.	0.	0.	1.17	0.	0.	0.	2.50	0.	0.
30 A	0.	0.	0.	1.17	0.	6.75	0.	3.62	0.	0.
L	0.	0.	0.	0.	0.	6.75	0.	2.62	0.	0.
R	0.	0.	0.	1.22	0.	0.	0.	2.02	0.	0.
40 A	0.	0.	0.	1.22	0.	1.29	0.	3.93	0.	0.
L	0.	0.	0.	0.	0.	1.29	0.	3.37	0.	0.
R	0.	0.	0.	6.96	0.	0.	0.	1.53	0.	0.
50 A	0.	0.	0.	6.96	0.	4.23	0.	11.60	0.	0.
L	0.	0.	0.	0.	0.	4.23	0.	11.50	0.	0.
R	0.	0.	0.	1.68	0.	0.	0.	2.10	0.	0.
60 A	0.	0.	0.	1.68	0.	3.51	0.	10.77	0.	0.
L	0.	0.	0.	0.	0.	3.51	0.	10.56	0.	0.

RADIANCE VALUES ARE IN MICROWATTS. VA AND SA ARE IN DEGREES.

FIGURE 116

IR RMS FLUCTUATION AS A FUNCTION OF SUN AZIMUTH

FILTER 5 AT 1136 AST INSOL ANGLE 42.0 DEG
SPECTRAL BAND 1.57 TO 2.98 MICRONS ELEVATION 30.5 KM

VA	0	10	20	30	40	50	60	70	80	90
SA										
R	0.	0.	0.	1.19	0.	0.	0.	2.18	0.	0.
70 A	0.	0.	0.	1.19	0.	5.68	0.	10.36	0.	0.
L	0.	0.	0.	0.	0.	5.68	0.	10.13	0.	0.
R	0.	0.	0.	2.54	0.	0.	0.	2.04	0.	0.
80 A	0.	0.	0.	2.54	0.	7.51	0.	4.16	0.	0.
L	0.	0.	0.	0.	0.	7.51	0.	3.63	0.	0.
R	0.	0.	0.	2.15	0.	0.	0.	2.29	0.	0.
90 A	0.	0.	0.	2.15	0.	4.70	0.	3.40	0.	0.
L	0.	0.	0.	0.	0.	4.70	0.	2.50	0.	0.
R	0.	0.	0.	3.72	0.	0.	0.	2.46	0.	0.
100 A	0.	0.	0.	3.72	0.	5.15	0.	3.20	0.	0.
L	0.	0.	0.	0.	0.	5.15	0.	2.04	0.	0.
R	0.	0.	1.71	6.05	0.	0.	0.	4.31	0.	0.
110 A	0.	0.	1.71	6.05	0.	9.75	0.	4.70	0.	0.
L	0.	0.	0.	0.	0.	9.75	0.	1.86	0.	0.
R	0.	0.	0.	4.44	0.	0.	0.	1.07	0.	0.
120 A	0.	0.	0.	4.44	0.	3.20	0.	2.15	0.	0.
L	0.	0.	0.	0.	0.	3.20	0.	1.86	0.	0.

RADIANCE VALUES ARE IN MICROWATTS. VA AND SA ARE IN DEGREES.

FIGURE 116 CONT.

IR RMS FLUCTUATION AS A FUNCTION OF SUN AZIMUTH

FILTER 5 AT 1136 AST INSOL ANGLE 42.0 DEG
SPECTRAL BAND 1.57 TO 2.98 MICRONS ELEVATION 30.5 KM

	VA	0	10	20	30	40	50	60	70	80	90
SA											
	R	0.	0.	0.	5.73	0.	0.	0.	1.29	0.	0.
130	A	0.	0.	0.	5.73	0.	7.15	0.	3.57	0.	0.
	L	0.	0.	0.	0.	0.	7.15	0.	3.33	0.	0.
	R	0.	0.	0.	1.20	0.	0.	0.	0.	0.	0.
140	A	0.	0.	0.	1.20	0.	6.26	0.	3.66	0.	0.
	L	0.	0.	0.	0.	0.	6.26	0.	3.66	0.	0.
	R	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
150	A	0.	0.	0.	0.	0.	4.68	0.	3.64	0.	0.
	L	0.	0.	0.	0.	0.	4.68	0.	3.64	0.	0.
	R	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
160	A	0.	0.	0.	0.	0.	2.28	0.	3.28	0.	0.
	L	0.	0.	0.	0.	0.	2.28	0.	3.28	0.	0.
	R	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
170	A	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
	L	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
	R	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
180	A	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
	L	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.

RADIANCE VALUES ARE IN MICROWATTS. VA AND SA ARE IN DEGREES.

FIGURE 116 CONT.

IR NUMBER OF OBSERVATIONS AS A FUNCTION OF SCATTERING ANGLE

FILTER 5 AT 1136 AST INSOL ANGLE 42.0 DEG
SPECTRAL BAND 1.57 TO 2.98 MICRONS ELEVATION 30.5 KM

SA	VA	0	10	20	30	40	50	60	70	80	90
0	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
10	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
20	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
30	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
40	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
50	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
60	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
70	0.	0.	0.	0.	0.	0.	0.	0.	1482.	0.	0.
80	0.	0.	0.	0.	0.	0.	0.	0.	720.	0.	0.
90	0.	0.	0.	0.	0.	0.	300.	0.	569.	0.	0.
100	0.	0.	0.	0.	0.	0.	554.	0.	555.	0.	0.
110	0.	0.	0.	945.	0.	374.	0.	525.	0.	0.	0.
120	0.	0.	0.	690.	0.	330.	0.	540.	0.	0.	0.
130	0.	0.	0.	525.	0.	270.	0.	495.	0.	0.	0.
140	0.	0.	15.	390.	0.	372.	0.	315.	0.	0.	0.
150	0.	0.	0.	285.	0.	270.	0.	15.	0.	0.	0.
160	0.	0.	0.	0.	0.	210.	0.	0.	0.	0.	0.
170	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
180	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.

RADIANCE VALUES ARE IN MICROWATTS. VA AND SA ARE IN DEGREES.

FIGURE 117

IR MEAN RADIANCE AS A FUNCTION OF SCATTERING ANGLE

FILTER 5 AT 1136 AST INSOL ANGLE 42.0 DEG
SPECTRAL BAND 1.57 TO 2.98 MICRONS ELEVATION 30.5 KM

VA SA	0	10	20	30	40	50	60	70	80	90
0	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
10	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
20	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
30	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
40	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
50	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
60	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
70	0.	0.	0.	0.	0.	0.	0.	48.39	0.	0.
80	0.	0.	0.	0.	0.	0.	0.	42.63	0.	0.
90	0.	0.	0.	0.	0.	30.58	0.	43.22	0.	0.
100	0.	0.	0.	0.	0.	17.66	0.	46.77	0.	0.
110	0.	0.	0.	32.47	0.	16.38	0.	46.14	0.	0.
120	0.	0.	0.	36.28	0.	25.01	0.	43.55	0.	0.
130	0.	0.	0.	31.31	0.	30.92	0.	43.20	0.	0.
140	0.	0.	46.35	32.13	0.	36.83	0.	45.60	0.	0.
150	0.	0.	0.	40.34	0.	37.41	0.	51.29	0.	0.
160	0.	0.	0.	0.	0.	45.11	0.	0.	0.	0.
170	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
180	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.

RADIANCE VALUES ARE IN MICROWATTS. VA AND SA ARE IN DEGREES.

FIGURE 118

IR RMS FLUCTUATION AS A FUNCTION OF SCATTERING ANGLE

FILTER 5 AT 1136 AST INSOL ANGLE 42.0 DEG
SPECTRAL BAND 1.57 TO 2.98 MICRONS ELEVATION 30.5 KM

SA	VA	0	10	20	30	40	50	60	70	80	90
0	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
10	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
20	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
30	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
40	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
50	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
60	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
70	0.	0.	0.	0.	0.	0.	0.	0.	2.87	0.	0.
80	0.	0.	0.	0.	0.	0.	0.	0.	8.22	0.	0.
90	0.	0.	0.	0.	0.	0.	7.16	0.	7.65	0.	0.
100	0.	0.	0.	0.	0.	0.	5.59	0.	2.49	0.	0.
110	0.	0.	0.	2.58	0.	5.80	0.	3.10	0.	0.	0.
120	0.	0.	0.	4.97	0.	6.77	0.	3.21	0.	0.	0.
130	0.	0.	0.	2.36	0.	10.25	0.	3.29	0.	0.	0.
140	0.	0.	1.71	7.45	0.	4.40	0.	3.57	0.	0.	0.
150	0.	0.	0.	8.64	0.	12.70	0.	2.62	0.	0.	0.
160	0.	0.	0.	0.	0.	6.11	0.	0.	0.	0.	0.
170	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
180	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.

RADIANCE VALUES ARE IN MICROWATTS. VA AND SA ARE IN DEGREES.

FIGURE 119

IR NUMBER OF OBSERVATIONS AS A FUNCTION OF SUN AZIMUTH

FILTER 3 AT 1141 AST INSOL ANGLE 41.9 DEG
SPECTRAL BAND 2.37 TO 2.80 MICRONS ELEVATION 30.5 KM

VA SA	0	10	20	30	40	50	60	70	80	90
R	0.	0.	0.	0.	75.	0.	0.	105.	0.	0.
0 A	0.	0.	0.	0.	98.	0.	0.	104.	0.	0.
L	0.	0.	0.	0.	120.	0.	0.	102.	0.	0.
R	0.	0.	0.	0.	195.	0.	0.	102.	0.	0.
10 A	0.	0.	0.	0.	158.	0.	8.	124.	0.	0.
L	0.	0.	0.	0.	120.	0.	15.	145.	0.	0.
R	0.	0.	0.	0.	135.	0.	0.	202.	0.	0.
20 A	0.	0.	0.	30.	68.	8.	83.	101.	0.	0.
L	0.	0.	0.	60.	0.	15.	165.	0.	0.	0.
R	0.	0.	0.	0.	179.	0.	0.	147.	0.	0.
30 A	0.	0.	0.	105.	90.	0.	98.	74.	0.	0.
L	0.	0.	0.	210.	0.	0.	195.	0.	0.	0.
R	0.	0.	0.	0.	163.	0.	0.	232.	0.	0.
40 A	0.	0.	0.	113.	82.	0.	90.	116.	0.	0.
L	0.	0.	0.	225.	0.	0.	180.	0.	0.	0.
R	0.	0.	0.	0.	158.	0.	0.	119.	0.	0.
50 A	0.	0.	0.	90.	79.	0.	75.	60.	0.	0.
L	0.	0.	0.	180.	0.	0.	150.	0.	0.	0.
R	0.	0.	0.	0.	135.	0.	0.	0.	0.	0.
60 A	0.	0.	0.	105.	68.	0.	97.	0.	0.	0.
L	0.	0.	0.	210.	0.	0.	194.	0.	0.	0.

RADIANCE VALUES ARE IN MICROWATTS. VA AND SA ARE IN DEGREES.

FIGURE 120

IR NUMBER OF OBSERVATIONS AS A FUNCTION OF SUN AZIMUTH

FILTER 3 AT 1141 AST INSOL ANGLE 41.9 DEG
SPECTRAL BAND 2.37 TO 2.80 MICRONS ELEVATION 30.5 KM

VA	0	10	20	30	40	50	60	70	80	90
SA										
R	0.	0.	0.	0.	163.	0.	0.	0.	0.	0.
70 A	0.	0.	0.	90.	82.	0.	105.	0.	0.	0.
L	0.	0.	0.	180.	0.	0.	210.	0.	0.	0.
R	0.	0.	0.	0.	168.	0.	0.	0.	0.	0.
80 A	0.	0.	0.	97.	84.	0.	105.	0.	0.	0.
L	0.	0.	0.	194.	0.	0.	209.	0.	0.	0.
R	0.	0.	0.	0.	119.	0.	0.	0.	0.	0.
90 A	0.	0.	0.	105.	60.	0.	90.	0.	0.	0.
L	0.	0.	0.	210.	0.	0.	180.	0.	0.	0.
R	0.	0.	0.	0.	177.	0.	0.	0.	0.	0.
100 A	0.	0.	0.	90.	89.	0.	98.	0.	0.	0.
L	0.	0.	0.	180.	0.	0.	195.	0.	0.	0.
R	0.	0.	0.	0.	175.	0.	0.	0.	0.	0.
110 A	0.	0.	0.	75.	88.	0.	83.	75.	0.	0.
L	0.	0.	0.	149.	0.	0.	165.	149.	0.	0.
R	0.	0.	0.	0.	240.	0.	0.	0.	0.	0.
120 A	0.	0.	0.	109.	120.	0.	103.	101.	0.	0.
L	0.	0.	0.	218.	0.	0.	205.	202.	0.	0.

RADIANCE VALUES ARE IN MICROWATTS. VA AND SA ARE IN DEGREES.

FIGURE 120 CONT.

IR NUMBER OF OBSERVATIONS AS A FUNCTION OF SUN AZIMUTH

FILTER 3 AT 1141 AST INSOL ANGLE 41.9 DEG
SPECTRAL BAND 2.37 TO 2.80 MICRONS ELEVATION 30.5 KM

VA SA	0	10	20	30	40	50	60	70	80	90
R	0.	0.	0.	0.	162.	0.	0.	0.	0.	0.
130 A	0.	0.	0.	83.	81.	0.	105.	81.	0.	0.
L	0.	0.	0.	165.	0.	0.	210.	162.	0.	0.
R	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
140 A	0.	0.	0.	113.	0.	0.	88.	89.	0.	0.
L	0.	0.	0.	225.	0.	0.	176.	178.	0.	0.
R	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
150 A	0.	0.	0.	82.	0.	0.	111.	75.	0.	0.
L	0.	0.	0.	164.	0.	0.	221.	150.	0.	0.
R	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
160 A	0.	0.	0.	75.	0.	0.	15.	22.	0.	0.
L	0.	0.	0.	149.	0.	0.	30.	44.	0.	0.
R	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
170 A	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
L	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
R	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
180 A	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
L	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.

RADIANCE VALUES ARE IN MICROWATTS. VA AND SA ARE IN DEGREES.

FIGURE 120 CONT.

IR MEAN RADIANCE AS A FUNCTION OF SUN AZIMUTH

FILTER 3 AT 1141 AST INSOL ANGLE 41.9 DEG
SPECTRAL BAND 2.37 TO 2.80 MICRONS ELEVATION 30.5 KM

VA	0	10	20	30	40	50	60	70	80	90
SA										
R	0.	0.	0.	0.	1.71	0.	0.	7.68	0.	0.
0 A	0.	0.	0.	0.	2.07	0.	0.	12.55	0.	0.
L	0.	0.	0.	0.	2.29	0.	0.	17.57	0.	0.
R	0.	0.	0.	0.	1.21	0.	0.	11.37	0.	0.
10 A	0.	0.	0.	0.	1.22	0.	1.07	14.60	0.	0.
L	0.	0.	0.	0.	1.24	0.	1.07	16.87	0.	0.
R	0.	0.	0.	0.	1.05	0.	0.	11.55	0.	0.
20 A	0.	0.	0.	1.92	1.05	7.19	0.92	11.55	0.	0.
L	0.	0.	0.	1.92	0.	7.19	0.92	0.	0.	0.
R	0.	0.	0.	0.	4.99	0.	0.	18.33	0.	0.
30 A	0.	0.	0.	1.34	4.99	0.	0.49	18.33	0.	0.
L	0.	0.	0.	1.34	0.	0.	0.49	0.	0.	0.
R	0.	0.	0.	0.	3.07	0.	0.	15.06	0.	0.
40 A	0.	0.	0.	1.33	3.07	0.	0.96	15.06	0.	0.
L	0.	0.	0.	1.33	0.	0.	0.96	0.	0.	0.
R	0.	0.	0.	0.	8.38	0.	0.	17.21	0.	0.
50 A	0.	0.	0.	2.95	8.38	0.	0.62	17.21	0.	0.
L	0.	0.	0.	2.95	0.	0.	0.62	0.	0.	0.
R	0.	0.	0.	0.	4.43	0.	0.	0.	0.	0.
60 A	0.	0.	0.	3.34	4.43	0.	0.53	0.	0.	0.
L	0.	0.	0.	3.34	0.	0.	0.53	0.	0.	0.

RADIANCE VALUES ARE IN MICROWATTS. VA AND SA ARE IN DEGREES.

FIGURE 121

IR MEAN RADIANCE AS A FUNCTION OF SUN AZIMUTH

FILTER 3 AT 1141 AST INSOL ANGLE 41.9 DEG
SPECTRAL BAND 2.37 TO 2.80 MICRONS ELEVATION 30.5 KM

VA	0	10	20	30	40	50	60	70	80	90
SA										
R	0.	0.	0.	0.	8.06	0.	0.	0.	0.	0.
70 A	0.	0.	0.	2.82	8.06	0.	1.03	0.	0.	0.
L	0.	0.	0.	2.82	0.	0.	1.03	0.	0.	0.
R	0.	0.	0.	0.	13.97	0.	0.	0.	0.	0.
80 A	0.	0.	0.	2.36	13.97	0.	1.33	0.	0.	0.
L	0.	0.	0.	2.36	0.	0.	1.33	0.	0.	0.
R	0.	0.	0.	0.	20.02	0.	0.	0.	0.	0.
90 A	0.	0.	0.	5.27	20.02	0.	1.68	0.	0.	0.
L	0.	0.	0.	5.27	0.	0.	1.68	0.	0.	0.
R	0.	0.	0.	0.	11.60	0.	0.	0.	0.	0.
100 A	0.	0.	0.	4.72	11.60	0.	2.73	0.	0.	0.
L	0.	0.	0.	4.72	0.	0.	2.73	0.	0.	0.
R	0.	0.	0.	0.	16.03	0.	0.	0.	0.	0.
110 A	0.	0.	0.	3.23	16.03	0.	1.64	6.49	0.	0.
L	0.	0.	0.	3.23	0.	0.	1.64	6.49	0.	0.
R	0.	0.	0.	0.	2.88	0.	0.	0.	0.	0.
120 A	0.	0.	0.	7.77	2.88	0.	8.22	13.77	0.	0.
L	0.	0.	0.	7.77	0.	0.	8.22	13.77	0.	0.

RADIANCE VALUES ARE IN MICROWATTS. VA AND SA ARE IN DEGREES.

FIGURE 121 CONT.

IR MEAN RADIANCE AS A FUNCTION OF SUN AZIMUTH

FILTER 3 AT 1141 AST INSOL ANGLE 41.9 DEG
SPECTRAL BAND 2.37 TO 2.80 MICRONS ELEVATION 30.5 KM

	VA	0	10	20	30	40	50	60	70	80	90
SA											
	R	0.	0.	0.	0.	7.67	0.	0.	0.	0.	0.
130	A	0.	0.	0.	4.24	7.67	0.	7.53	12.22	0.	0.
	L	0.	0.	0.	4.24	0.	0.	7.53	12.22	0.	0.
	R	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
140	A	0.	0.	0.	1.77	0.	0.	8.81	17.08	0.	0.
	L	0.	0.	0.	1.77	0.	0.	8.81	17.08	0.	0.
	R	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
150	A	0.	0.	0.	20.73	0.	0.	15.26	18.96	0.	0.
	L	0.	0.	0.	20.73	0.	0.	15.26	18.96	0.	0.
	R	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
160	A	0.	0.	0.	22.03	0.	0.	32.33	21.38	0.	0.
	L	0.	0.	0.	22.03	0.	0.	32.33	21.38	0.	0.
	R	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
170	A	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
	L	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
	R	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
180	A	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
	L	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.

RADIANCE VALUES ARE IN MICROWATTS. VA AND SA ARE IN DEGREES.

FIGURE 121 CONT.

IR RMS FLUCTUATION AS A FUNCTION OF SUN AZIMUTH

FILTER 3 AT 1141 AST INSOL ANGLE 41.9 DEG
SPECTRAL BAND 2.37 TO 2.80 MICRONS ELEVATION 30.5 KM

VA	0	10	20	30	40	50	60	70	80	90
SA										
R	0.	0.	0.	0.	0.55	0.	0.	2.67	0.	0.
0 A	0.	0.	0.	0.	0.62	0.	0.	3.23	0.	0.
L	0.	0.	0.	0.	0.30	0.	0.	1.82	0.	0.
R	0.	0.	0.	0.	0.40	0.	0.	1.67	0.	0.
10 A	0.	0.	0.	0.	0.48	0.	0.23	3.79	0.	0.
L	0.	0.	0.	0.	0.28	0.	0.23	3.40	0.	0.
R	0.	0.	0.	0.	0.68	0.	0.	2.03	0.	0.
20 A	0.	0.	0.	0.36	0.68	0.30	0.29	2.03	0.	0.
L	0.	0.	0.	0.36	0.	0.30	0.29	0.	0.	0.
R	0.	0.	0.	0.	2.61	0.	0.	1.90	0.	0.
30 A	0.	0.	0.	0.29	2.61	0.	0.27	1.90	0.	0.
L	0.	0.	0.	0.29	0.	0.	0.27	0.	0.	0.
R	0.	0.	0.	0.	3.09	0.	0.	2.70	0.	0.
40 A	0.	0.	0.	0.27	3.09	0.	0.25	2.70	0.	0.
L	0.	0.	0.	0.27	0.	0.	0.25	0.	0.	0.
R	0.	0.	0.	0.	4.14	0.	0.	1.58	0.	0.
50 A	0.	0.	0.	1.13	4.14	0.	0.29	1.58	0.	0.
L	0.	0.	0.	1.13	0.	0.	0.29	0.	0.	0.
R	0.	0.	0.	0.	1.25	0.	0.	0.	0.	0.
60 A	0.	0.	0.	0.90	1.25	0.	0.36	0.	0.	0.
L	0.	0.	0.	0.90	0.	0.	0.36	0.	0.	0.

RADIANCE VALUES ARE IN MICROWATTS. VA AND SA ARE IN DEGREES.

FIGURE 122

IR RMS FLUCTUATION AS A FUNCTION OF SUN AZIMUTH

FILTER 3 AT 1141 AST INSOL ANGLE 41.9 DEG
SPECTRAL BAND 2.37 TO 2.80 MICRONS ELEVATION 30.5 KM

VA	0	10	20	30	40	50	60	70	80	90
SA										
R	0.	0.	0.	0.	4.54	0.	0.	0.	0.	0.
70 A	0.	0.	0.	0.31	4.54	0.	0.32	0.	0.	0.
L	0.	0.	0.	0.31	0.	0.	0.32	0.	0.	0.
R	0.	0.	0.	0.	7.53	0.	0.	0.	0.	0.
80 A	0.	0.	0.	0.44	7.53	0.	1.05	0.	0.	0.
L	0.	0.	0.	0.44	0.	0.	1.05	0.	0.	0.
R	0.	0.	0.	0.	11.79	0.	0.	0.	0.	0.
90 A	0.	0.	0.	2.16	11.79	0.	1.12	0.	0.	0.
L	0.	0.	0.	2.16	0.	0.	1.12	0.	0.	0.
R	0.	0.	0.	0.	7.61	0.	0.	0.	0.	0.
100 A	0.	0.	0.	1.01	7.61	0.	2.49	0.	0.	0.
L	0.	0.	0.	1.01	0.	0.	2.49	0.	0.	0.
R	0.	0.	0.	0.	9.04	0.	0.	0.	0.	0.
110 A	0.	0.	0.	1.14	9.04	0.	0.89	4.57	0.	0.
L	0.	0.	0.	1.14	0.	0.	0.89	4.57	0.	0.
R	0.	0.	0.	0.	1.60	0.	0.	0.	0.	0.
120 A	0.	0.	0.	4.72	1.60	0.	4.53	3.32	0.	0.
L	0.	0.	0.	4.72	0.	0.	4.53	3.32	0.	0.

RADIANCE VALUES ARE IN MICROWATTS. VA AND SA ARE IN DEGREES.

FIGURE 122 CONT.

IR RMS FLUCTUATION AS A FUNCTION OF SUN AZIMUTH

FILTER 3 AT 1141 AST INSOL ANGLE 41.9 DEG
SPECTRAL BAND 2.37 TO 2.80 MICRONS ELEVATION 30.5 KM

	VA	0	10	20	30	40	50	60	70	80	90
SA											
	R	0.	0.	0.	0.	4.32	0.	0.	0.	0.	0.
130	A	0.	0.	0.	2.22	4.32	0.	3.82	2.23	0.	0.
	L	0.	0.	0.	2.22	0.	0.	3.82	2.23	0.	0.
	R	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
140	A	0.	0.	0.	1.01	0.	0.	4.95	3.72	0.	0.
	L	0.	0.	0.	1.01	0.	0.	4.95	3.72	0.	0.
	R	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
150	A	0.	0.	0.	8.98	0.	0.	8.80	1.94	0.	0.
	L	0.	0.	0.	8.98	0.	0.	8.80	1.94	0.	0.
	R	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
160	A	0.	0.	0.	9.43	0.	0.	2.83	1.48	0.	0.
	L	0.	0.	0.	9.43	0.	0.	2.83	1.48	0.	0.
	R	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
170	A	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
	L	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
	R	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
180	A	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
	L	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.

RADIANCE VALUES ARE IN MICROWATTS. VA AND SA ARE IN DEGREES.

FIGURE 122 CONT.

IR NUMBER OF OBSERVATIONS AS A FUNCTION OF SCATTERING ANGLE

FILTER 3 AT 1141 AST INSOL ANGLE 41.9 DEG
SPECTRAL BAND 2.37 TO 2.80 MICRONS ELEVATION 30.5 KM

SA	VA	0	10	20	30	40	50	60	70	80	90
0		0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
10		0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
20		0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
30		0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
40		0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
50		0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
60		0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
70		0.	0.	0.	0.	0.	0.	0.	930.	0.	0.
80		0.	0.	0.	0.	0.	0.	315.	224.	0.	0.
90		0.	0.	0.	0.	585.	15.	449.	0.	0.	0.
100		0.	0.	0.	0.	520.	0.	374.	0.	0.	0.
110		0.	0.	0.	495.	366.	0.	345.	44.	0.	0.
120		0.	0.	0.	585.	274.	0.	270.	249.	0.	0.
130		0.	0.	0.	479.	292.	0.	280.	279.	0.	0.
140		0.	0.	0.	389.	330.	0.	281.	313.	0.	0.
150		0.	0.	0.	398.	117.	0.	356.	0.	0.	0.
160		0.	0.	0.	373.	0.	0.	30.	0.	0.	0.
170		0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
180		0.	0.	0.	0.	0.	0.	0.	0.	0.	0.

RADIANCE VALUES ARE IN MICROWATTS. VA AND SA ARE IN DEGREES.

FIGURE 123

IR MEAN RADIANCE AS A FUNCTION OF SCATTERING ANGLE

FILTER 3 AT 1141 AST INSOL ANGLE 41.9 DEG
SPECTRAL BAND 2.37 TO 2.80 MICRONS ELEVATION 30.5 KM

VA SA	0	10	20	30	40	50	60	70	80	90
0	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
10	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
20	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
30	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
40	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
50	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
60	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
70	0.	0.	0.	0.	0.	0.	0.	14.38	0.	0.
80	0.	0.	0.	0.	0.	0.	0.72	15.18	0.	0.
90	0.	0.	0.	0.	1.50	7.19	0.71	0.	0.	0.
100	0.	0.	0.	0.	4.46	0.	0.86	0.	0.	0.
110	0.	0.	0.	1.41	7.32	0.	1.60	12.32	0.	0.
120	0.	0.	0.	3.05	16.76	0.	2.33	8.89	0.	0.
130	0.	0.	0.	4.18	15.07	0.	6.25	13.90	0.	0.
140	0.	0.	0.	4.28	3.56	0.	8.48	18.91	0.	0.
150	0.	0.	0.	4.54	8.86	0.	11.91	0.	0.	0.
160	0.	0.	0.	18.36	0.	0.	32.33	0.	0.	0.
170	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
180	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.

RADIANCE VALUES ARE IN MICROWATTS. VA AND SA ARE IN DEGREES.

FIGURE 124

IR RMS FLUCTUATION AS A FUNCTION OF SCATTERING ANGLE

FILTER 3 AT 1141 AST INSOL ANGLE 41.9 DEG
SPECTRAL BAND 2.37 TO 2.80 MICRONS ELEVATION 30.5 KM

SA	VA	0	10	20	30	40	50	60	70	80	90
0	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
10	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
20	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
30	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
40	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
50	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
60	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
70	0.	0.	0.	0.	0.	0.	0.	0.	4.30	0.	0.
80	0.	0.	0.	0.	0.	0.	0.	0.36	2.69	0.	0.
90	0.	0.	0.	0.	0.62	0.30	0.35	0.	0.	0.	0.
100	0.	0.	0.	0.	3.66	0.	0.39	0.	0.	0.	0.
110	0.	0.	0.	0.35	4.17	0.	1.12	1.92	0.	0.	0.
120	0.	0.	0.	0.87	10.09	0.	2.24	4.85	0.	0.	0.
130	0.	0.	0.	2.10	8.85	0.	5.02	3.30	0.	0.	0.
140	0.	0.	0.	2.63	2.39	0.	4.92	2.96	0.	0.	0.
150	0.	0.	0.	4.31	3.98	0.	8.30	0.	0.	0.	0.
160	0.	0.	0.	10.86	0.	0.	2.83	0.	0.	0.	0.
170	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
180	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.

RADIANCE VALUES ARE IN MICROWATTS. VA AND SA ARE IN DEGREES.

FIGURE 125

IR NUMBER OF OBSERVATIONS AS A FUNCTION OF SUN AZIMUTH

FILTER 2 AT 1145 AST INSOL ANGLE 41.9 DEG
SPECTRAL BAND 2.63 TO 2.80 MICRONS ELEVATION 30.5 KM

VA SA	0	10	20	30	40	50	60	70	80	90
R	0.	0.	0.	0.	60.	0.	0.	105.	0.	0.
0 A	0.	0.	0.	0.	68.	0.	0.	105.	0.	0.
L	0.	0.	0.	0.	75.	0.	0.	104.	0.	0.
R	0.	0.	0.	0.	224.	0.	0.	195.	0.	0.
10 A	0.	0.	8.	0.	150.	0.	0.	195.	0.	0.
L	0.	0.	15.	0.	75.	0.	0.	195.	0.	0.
R	0.	0.	0.	0.	195.	0.	0.	225.	0.	0.
20 A	0.	0.	0.	30.	98.	0.	0.	188.	0.	0.
L	0.	0.	0.	60.	0.	0.	0.	150.	0.	0.
R	0.	0.	0.	0.	210.	0.	0.	194.	0.	0.
30 A	0.	0.	0.	97.	105.	0.	0.	172.	0.	0.
L	0.	0.	0.	193.	0.	0.	0.	150.	0.	0.
R	0.	0.	0.	0.	195.	0.	0.	209.	0.	0.
40 A	0.	0.	0.	113.	98.	0.	0.	201.	0.	0.
L	0.	0.	0.	225.	0.	0.	0.	193.	0.	0.
R	0.	0.	0.	0.	195.	0.	0.	164.	0.	0.
50 A	0.	0.	0.	83.	98.	0.	0.	164.	0.	0.
L	0.	0.	0.	165.	0.	0.	0.	164.	0.	0.
R	0.	0.	0.	0.	195.	0.	0.	194.	0.	0.
60 A	0.	0.	0.	111.	98.	0.	0.	194.	0.	0.
L	0.	0.	0.	222.	0.	0.	0.	194.	0.	0.

RADIANCE VALUES ARE IN MICROWATTS. VA AND SA ARE IN DEGREES.

FIGURE 126

IR NUMBER OF OBSERVATIONS AS A FUNCTION OF SUN AZIMUTH

FILTER 2 AT 1145 AST INSOL ANGLE 41.9 DEG
SPECTRAL BAND 2.63 TO 2.80 MICRONS ELEVATION 30.5 KM

VA	0	10	20	30	40	50	60	70	80	90
SA										
R	0.	0.	0.	0.	164.	0.	0.	195.	0.	0.
70 A	0.	0.	0.	83.	82.	0.	0.	165.	0.	0.
L	0.	0.	0.	165.	0.	0.	0.	135.	0.	0.
R	0.	0.	0.	0.	208.	0.	0.	225.	0.	0.
80 A	0.	0.	0.	120.	104.	0.	0.	203.	0.	0.
L	0.	0.	0.	240.	0.	0.	0.	180.	0.	0.
R	0.	0.	0.	0.	208.	0.	0.	194.	0.	0.
90 A	0.	0.	0.	97.	104.	0.	0.	157.	0.	0.
L	0.	0.	0.	194.	0.	0.	0.	120.	0.	0.
R	0.	0.	0.	0.	180.	0.	0.	103.	0.	0.
100 A	0.	0.	0.	112.	90.	0.	0.	142.	0.	0.
L	0.	0.	0.	224.	0.	0.	0.	180.	0.	0.
R	0.	0.	0.	0.	195.	0.	0.	178.	0.	0.
110 A	0.	0.	0.	111.	98.	0.	0.	172.	0.	0.
L	0.	0.	0.	222.	0.	0.	0.	165.	0.	0.
R	0.	0.	0.	0.	193.	0.	0.	179.	0.	0.
120 A	0.	0.	0.	98.	97.	0.	0.	187.	0.	0.
L	0.	0.	0.	195.	0.	0.	0.	195.	0.	0.

RADIANCE VALUES ARE IN MICROWATTS. VA AND SA ARE IN DEGREES.

FIGURE 126 CONT.

IR NUMBER OF OBSERVATIONS AS A FUNCTION OF SUN AZIMUTH

FILTER 2 AT 1145 AST INSOL ANGLE 41.9 DEG
SPECTRAL BAND 2.63 TO 2.80 MICRONS ELEVATION 30.5 KM

	VA	0	10	20	30	40	50	60	70	80	90
SA											
R		0.	0.	0.	0.	120.	0.	0.	119.	0.	0.
130 A		0.	0.	0.	97.	60.	0.	0.	157.	0.	0.
L		0.	0.	0.	194.	0.	0.	0.	195.	0.	0.
R		0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
140 A		0.	0.	0.	83.	0.	0.	0.	98.	0.	0.
L		0.	0.	0.	165.	0.	0.	0.	195.	0.	0.
R		0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
150 A		0.	0.	0.	105.	0.	0.	0.	67.	0.	0.
L		0.	0.	0.	209.	0.	0.	0.	134.	0.	0.
R		0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
160 A		0.	0.	0.	60.	0.	0.	0.	45.	0.	0.
L		0.	0.	0.	119.	0.	0.	0.	90.	0.	0.
R		0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
170 A		0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
L		0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
R		0.	15.	0.	0.	0.	0.	0.	0.	0.	0.
180 A		0.	8.	8.	8.	0.	0.	0.	0.	0.	0.
L		0.	0.	15.	15.	0.	0.	0.	0.	0.	0.

RADIANCE VALUES ARE IN MICROWATTS. VA AND SA ARE IN DEGREES.

FIGURE 126 CONT.

IR MEAN RADIANCE AS A FUNCTION OF SUN AZIMUTH

FILTER 2 AT 1145 AST INSOL ANGLE 41.9 DEG
SPECTRAL BAND 2.63 TO 2.80 MICRONS ELEVATION 30.5 KM

VA	0	10	20	30	40	50	60	70	80	90
SA										
R	0.	0.	0.	0.	0.20	0.	0.	0.21	0.	0.
0 A	0.	0.	0.	0.	0.19	0.	0.	0.20	0.	0.
L	0.	0.	0.	0.	0.18	0.	0.	0.20	0.	0.
R	0.	0.	0.	0.	0.19	0.	0.	0.20	0.	0.
10 A	0.	0.	0.27	0.	0.18	0.	0.	0.20	0.	0.
L	0.	0.	0.27	0.	0.17	0.	0.	0.20	0.	0.
R	0.	0.	0.	0.	0.18	0.	0.	0.19	0.	0.
20 A	0.	0.	0.	0.17	0.18	0.	0.	0.19	0.	0.
L	0.	0.	0.	0.17	0.	0.	0.	0.18	0.	0.
R	0.	0.	0.	0.	0.20	0.	0.	0.21	0.	0.
30 A	0.	0.	0.	0.19	0.20	0.	0.	0.20	0.	0.
L	0.	0.	0.	0.19	0.	0.	0.	0.18	0.	0.
R	0.	0.	0.	0.	0.18	0.	0.	0.19	0.	0.
40 A	0.	0.	0.	0.19	0.18	0.	0.	0.19	0.	0.
L	0.	0.	0.	0.19	0.	0.	0.	0.19	0.	0.
R	0.	0.	0.	0.	0.18	0.	0.	0.19	0.	0.
50 A	0.	0.	0.	0.19	0.18	0.	0.	0.19	0.	0.
L	0.	0.	0.	0.19	0.	0.	0.	0.19	0.	0.
R	0.	0.	0.	0.	0.18	0.	0.	0.17	0.	0.
60 A	0.	0.	0.	0.19	0.18	0.	0.	0.18	0.	0.
L	0.	0.	0.	0.19	0.	0.	0.	0.18	0.	0.

RADIANCE VALUES ARE IN MICROWATTS. VA AND SA ARE IN DEGREES.

FIGURE 127

IR MEAN RADIANCE AS A FUNCTION OF SUN AZIMUTH

FILTER 2 AT 1145 AST INSOL ANGLE 41.9 DEG
SPECTRAL BAND 2.63 TO 2.80 MICRONS ELEVATION 30.5 KM

VA	0	10	20	30	40	50	60	70	80	90
SA										
R	0.	0.	0.	0.	0.19	0.	0.	0.17	0.	0.
70 A	0.	0.	0.	0.20	0.19	0.	0.	0.17	0.	0.
L	0.	0.	0.	0.20	0.	0.	0.	0.17	0.	0.
R	0.	0.	0.	0.	0.18	0.	0.	0.19	0.	0.
80 A	0.	0.	0.	0.20	0.18	0.	0.	0.18	0.	0.
L	0.	0.	0.	0.20	0.	0.	0.	0.17	0.	0.
R	0.	0.	0.	0.	0.17	0.	0.	0.19	0.	0.
90 A	0.	0.	0.	0.19	0.17	0.	0.	0.18	0.	0.
L	0.	0.	0.	0.19	0.	0.	0.	0.16	0.	0.
R	0.	0.	0.	0.	0.21	0.	0.	0.20	0.	0.
100 A	0.	0.	0.	0.18	0.21	0.	0.	0.18	0.	0.
L	0.	0.	0.	0.18	0.	0.	0.	0.17	0.	0.
R	0.	0.	0.	0.	0.18	0.	0.	0.18	0.	0.
110 A	0.	0.	0.	0.17	0.18	0.	0.	0.18	0.	0.
L	0.	0.	0.	0.17	0.	0.	0.	0.18	0.	0.
R	0.	0.	0.	0.	0.17	0.	0.	0.18	0.	0.
120 A	0.	0.	0.	0.20	0.17	0.	0.	0.17	0.	0.
L	0.	0.	0.	0.20	0.	0.	0.	0.17	0.	0.

RADIANCE VALUES ARE IN MICROWATTS. VA AND SA ARE IN DEGREES.

FIGURE 127 CONT.

IR MEAN RADIANCE AS A FUNCTION OF SUN AZIMUTH

FILTER 2 AT 1145 AST INSOL ANGLE 41.9 DEG
SPECTRAL BAND 2.63 TO 2.80 MICRONS ELEVATION 30.5 KM

	VA	0	10	20	30	40	50	60	70	80	90
SA											
R	0.	0.	0.	0.	0.21	0.	0.	0.	0.17	0.	0.
130 A	0.	0.	0.	0.20	0.21	0.	0.	0.	0.17	0.	0.
L	0.	0.	0.	0.20	0.	0.	0.	0.	0.17	0.	0.
R	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
140 A	0.	0.	0.	0.18	0.	0.	0.	0.	0.17	0.	0.
L	0.	0.	0.	0.18	0.	0.	0.	0.	0.17	0.	0.
R	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
150 A	0.	0.	0.	0.18	0.	0.	0.	0.	0.20	0.	0.
L	0.	0.	0.	0.18	0.	0.	0.	0.	0.20	0.	0.
R	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
160 A	0.	0.	0.	0.18	0.	0.	0.	0.	0.17	0.	0.
L	0.	0.	0.	0.18	0.	0.	0.	0.	0.17	0.	0.
R	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
170 A	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
L	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
R	0.	0.27	0.	0.	0.	0.	0.	0.	0.	0.	0.
180 A	0.	0.27	0.25	0.17	0.	0.	0.	0.	0.	0.	0.
L	0.	0.	0.25	0.17	0.	0.	0.	0.	0.	0.	0.

RADIANCE VALUES ARE IN MICROWATTS. VA AND SA ARE IN DEGREES.

FIGURE 127 CONT.

IR RMS FLUCTUATION AS A FUNCTION OF SUN AZIMUTH

FILTER 2 AT 1145 AST INSOL ANGLE 41.9 DEG
SPECTRAL BAND 2.63 TO 2.80 MICRONS ELEVATION 30.5 KM

VA	0	10	20	30	40	50	60	70	80	90
SA										
R	0.	0.	0.	0.	0.14	0.	0.	0.14	0.	0.
0 A	0.	0.	0.	0.	0.19	0.	0.	0.20	0.	0.
L	0.	0.	0.	0.	0.13	0.	0.	0.14	0.	0.
R	0.	0.	0.	0.	0.13	0.	0.	0.14	0.	0.
10 A	0.	0.	0.17	0.	0.19	0.	0.	0.21	0.	0.
L	0.	0.	0.17	0.	0.13	0.	0.	0.15	0.	0.
R	0.	0.	0.	0.	0.14	0.	0.	0.13	0.	0.
20 A	0.	0.	0.	0.11	0.14	0.	0.	0.20	0.	0.
L	0.	0.	0.	0.11	0.	0.	0.	0.15	0.	0.
R	0.	0.	0.	0.	0.14	0.	0.	0.15	0.	0.
30 A	0.	0.	0.	0.14	0.14	0.	0.	0.20	0.	0.
L	0.	0.	0.	0.14	0.	0.	0.	0.13	0.	0.
R	0.	0.	0.	0.	0.14	0.	0.	0.13	0.	0.
40 A	0.	0.	0.	0.14	0.14	0.	0.	0.19	0.	0.
L	0.	0.	0.	0.14	0.	0.	0.	0.13	0.	0.
R	0.	0.	0.	0.	0.13	0.	0.	0.14	0.	0.
50 A	0.	0.	0.	0.14	0.13	0.	0.	0.21	0.	0.
L	0.	0.	0.	0.14	0.	0.	0.	0.15	0.	0.
R	0.	0.	0.	0.	0.13	0.	0.	0.13	0.	0.
60 A	0.	0.	0.	0.15	0.13	0.	0.	0.19	0.	0.
L	0.	0.	0.	0.15	0.	0.	0.	0.15	0.	0.

RADIANCE VALUES ARE IN MICROWATTS. VA AND SA ARE IN DEGREES.

FIGURE 128

IR RMS FLUCTUATION AS A FUNCTION OF SUN AZIMUTH

FILTER 2 AT 1145 AST INSOL ANGLE 41.9 DEG
SPECTRAL BAND 2.63 TO 2.80 MICRONS ELEVATION 30.5 KM

VA	0	10	20	30	40	50	60	70	80	90
SA										
R	0.	0.	0.	0.	0.13	0.	0.	0.13	0.	0.
70 A	0.	0.	0.	0.15	0.13	0.	0.	0.19	0.	0.
L	0.	0.	0.	0.15	0.	0.	0.	0.13	0.	0.
R	0.	0.	0.	0.	0.13	0.	0.	0.13	0.	0.
80 A	0.	0.	0.	0.15	0.13	0.	0.	0.19	0.	0.
L	0.	0.	0.	0.15	0.	0.	0.	0.13	0.	0.
R	0.	0.	0.	0.	0.13	0.	0.	0.13	0.	0.
90 A	0.	0.	0.	0.14	0.13	0.	0.	0.19	0.	0.
L	0.	0.	0.	0.14	0.	0.	0.	0.14	0.	0.
R	0.	0.	0.	0.	0.14	0.	0.	0.15	0.	0.
100 A	0.	0.	0.	0.13	0.14	0.	0.	0.19	0.	0.
L	0.	0.	0.	0.13	0.	0.	0.	0.12	0.	0.
R	0.	0.	0.	0.	0.14	0.	0.	0.14	0.	0.
110 A	0.	0.	0.	0.14	0.14	0.	0.	0.19	0.	0.
L	0.	0.	0.	0.14	0.	0.	0.	0.13	0.	0.
R	0.	0.	0.	0.	0.13	0.	0.	0.13	0.	0.
120 A	0.	0.	0.	0.14	0.13	0.	0.	0.19	0.	0.
L	0.	0.	0.	0.14	0.	0.	0.	0.14	0.	0.

RADIANCE VALUES ARE IN MICROWATTS. VA AND SA ARE IN DEGREES.

FIGURE 128 CONT.

IR RMS FLUCTUATION AS A FUNCTION OF SUN AZIMUTH

FILTER 2 AT 1145 AST INSOL ANGLE 41.9 DEG
SPECTRAL BAND 2.63 TO 2.80 MICRONS ELEVATION 30.5 KM

VA SA	0	10	20	30	40	50	60	70	80	90
R	0.	0.	0.	0.	0.14	0.	0.	0.14	0.	0.
130 A	0.	0.	0.	0.14	0.14	0.	0.	0.20	0.	0.
L	0.	0.	0.	0.14	0.	0.	0.	0.13	0.	0.
R	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
140 A	0.	0.	0.	0.13	0.	0.	0.	0.13	0.	0.
L	0.	0.	0.	0.13	0.	0.	0.	0.13	0.	0.
R	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
150 A	0.	0.	0.	0.14	0.	0.	0.	0.16	0.	0.
L	0.	0.	0.	0.14	0.	0.	0.	0.16	0.	0.
R	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
160 A	0.	0.	0.	0.13	0.	0.	0.	0.12	0.	0.
L	0.	0.	0.	0.13	0.	0.	0.	0.12	0.	0.
R	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
170 A	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
L	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
R	0.	0.15	0.	0.	0.	0.	0.	0.	0.	0.
180 A	0.	0.15	0.16	0.14	0.	0.	0.	0.	0.	0.
L	0.	0.	0.16	0.14	0.	0.	0.	0.	0.	0.

RADIANCE VALUES ARE IN MICROWATTS. VA AND SA ARE IN DEGREES.

FIGURE 128' CONT.

IR NUMBER OF OBSERVATIONS AS A FUNCTION OF SCATTERING ANGLE

FILTER 2 AT 1145 AST INSOL ANGLE 41.9 DEG
SPECTRAL BAND 2.63 TO 2.80 MICRONS ELEVATION 30.5 KM

SA	VA	0	10	20	30	40	50	60	70	80	90
0		0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
10		0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
20		0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
30		0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
40		0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
50		0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
60		0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
70		0.	0.	0.	0.	0.	0.	0.	1511.	0.	0.
80		0.	0.	0.	0.	0.	0.	0.	717.	0.	0.
90		0.	0.	0.	0.	539.	0.	0.	628.	0.	0.
100		0.	0.	0.	0.	690.	0.	0.	555.	0.	0.
110		0.	0.	0.	493.	434.	0.	0.	447.	0.	0.
120		0.	0.	15.	612.	356.	0.	0.	523.	0.	0.
130		0.	0.	0.	479.	315.	0.	0.	493.	0.	0.
140		0.	0.	0.	431.	298.	0.	0.	314.	0.	0.
150		0.	15.	0.	404.	60.	0.	0.	30.	0.	0.
160		0.	0.	15.	373.	0.	0.	0.	0.	0.	0.
170		0.	0.	0.	15.	0.	0.	0.	0.	0.	0.
180		0.	0.	0.	0.	0.	0.	0.	0.	0.	0.

RADIANCE VALUES ARE IN MICROWATTS. VA AND SA ARE IN DEGREES.

FIGURE 129

IR MEAN RADIANCE AS A FUNCTION OF SCATTERING ANGLE

FILTER 2 AT 1145 AST INSOL ANGLE 41.9 DEG
SPECTRAL BAND 2.63 TO 2.80 MICRONS ELEVATION 30.5 KM

VA	0	10	20	30	40	50	60	70	80	90
SA										
0	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
10	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
20	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
30	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
40	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
50	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
60	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
70	0.	0.	0.	0.	0.	0.	0.	0.20	0.	0.
80	0.	0.	0.	0.	0.	0.	0.	0.19	0.	0.
90	0.	0.	0.	0.	0.19	0.	0.	0.17	0.	0.
100	0.	0.	0.	0.	0.18	0.	0.	0.18	0.	0.
110	0.	0.	0.	0.19	0.18	0.	0.	0.18	0.	0.
120	0.	0.	0.27	0.19	0.18	0.	0.	0.17	0.	0.
130	0.	0.	0.	0.19	0.20	0.	0.	0.17	0.	0.
140	0.	0.	0.	0.18	0.18	0.	0.	0.18	0.	0.
150	0.	0.27	0.	0.19	0.20	0.	0.	0.16	0.	0.
160	0.	0.	0.25	0.18	0.	0.	0.	0.	0.	0.
170	0.	0.	0.	0.17	0.	0.	0.	0.	0.	0.
180	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.

RADIANCE VALUES ARE IN MICROWATTS. VA AND SA ARE IN DEGREES.

FIGURE 130

IR RMS FLUCTUATION AS A FUNCTION OF SCATTERING ANGLE

FILTER 2 AT 1145 AST INSOL ANGLE 41.9 DEG
SPECTRAL BAND 2.63 TO 2.80 MICRONS ELEVATION 30.5 KM

SA	VA	0	10	20	30	40	50	60	70	80	90
0	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
10	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
20	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
30	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
40	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
50	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
60	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
70	0.	0.	0.	0.	0.	0.	0.	0.	0.14	0.	0.
80	0.	0.	0.	0.	0.	0.	0.	0.	0.14	0.	0.
90	0.	0.	0.	0.	0.	0.14	0.	0.	0.13	0.	0.
100	0.	0.	0.	0.	0.	0.13	0.	0.	0.14	0.	0.
110	0.	0.	0.	0.13	0.13	0.	0.	0.	0.13	0.	0.
120	0.	0.	0.17	0.15	0.14	0.	0.	0.	0.14	0.	0.
130	0.	0.	0.	0.14	0.14	0.	0.	0.	0.14	0.	0.
140	0.	0.	0.	0.14	0.13	0.	0.	0.	0.14	0.	0.
150	0.	0.15	0.	0.14	0.14	0.	0.	0.	0.12	0.	0.
160	0.	0.	0.16	0.14	0.	0.	0.	0.	0.	0.	0.
170	0.	0.	0.	0.14	0.	0.	0.	0.	0.	0.	0.
180	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.

RADIANCE VALUES ARE IN MICROWATTS. VA AND SA ARE IN DEGREES.

FIGURE 131

IR NUMBER OF OBSERVATIONS AS A FUNCTION OF SUN AZIMUTH

FILTER 1 AT 1150 AST INSOL ANGLE 41.8 DEG
SPECTRAL BAND 2.50 TO 2.80 MICRONS ELEVATION 30.5 KM

VA	0	10	20	30	40	50	60	70	80	90
SA										
R	0.	0.	0.	105.	0.	0.	75.	105.	0.	0.
0 A	0.	0.	0.	75.	0.	0.	90.	98.	0.	0.
L	0.	0.	0.	45.	0.	0.	105.	90.	0.	0.
R	0.	0.	0.	150.	0.	0.	210.	210.	0.	0.
10 A	0.	0.	0.	135.	0.	0.	180.	218.	0.	0.
L	0.	0.	0.	120.	0.	0.	150.	225.	0.	0.
R	0.	0.	0.	195.	0.	0.	149.	210.	0.	0.
20 A	0.	0.	0.	98.	0.	0.	75.	210.	0.	0.
L	0.	0.	0.	0.	0.	0.	0.	210.	0.	0.
R	0.	0.	0.	135.	0.	0.	195.	225.	0.	0.
30 A	0.	0.	0.	68.	0.	98.	98.	218.	0.	0.
L	0.	0.	0.	0.	0.	195.	0.	210.	0.	0.
R	0.	0.	0.	195.	0.	0.	164.	90.	0.	0.
40 A	0.	0.	0.	98.	0.	82.	82.	150.	0.	0.
L	0.	0.	0.	0.	0.	164.	0.	210.	0.	0.
R	0.	0.	0.	149.	0.	0.	180.	195.	0.	0.
50 A	0.	0.	0.	75.	0.	83.	90.	188.	0.	0.
L	0.	0.	0.	0.	0.	165.	0.	180.	0.	0.
R	0.	0.	0.	105.	0.	0.	135.	210.	0.	0.
60 A	0.	0.	0.	53.	0.	82.	68.	203.	0.	0.
L	0.	0.	0.	0.	0.	164.	0.	195.	0.	0.

RADIANCE VALUES ARE IN MICROWATTS. VA AND SA ARE IN DEGREES.

FIGURE 132

IR NUMBER OF OBSERVATIONS AS A FUNCTION OF SUN AZIMUTH

FILTER 1 AT 1150 AST INSOL ANGLE 41.8 DEG
SPECTRAL BAND 2.50 TO 2.80 MICRONS ELEVATION 30.5 KM

	VA	0	10	20	30	40	50	60	70	80	90
SA											
R		0.	0.	0.	164.	0.	0.	179.	210.	0.	0.
70 A		0.	0.	0.	82.	0.	98.	90.	210.	0.	0.
L		0.	0.	0.	0.	0.	195.	0.	210.	0.	0.
R		0.	0.	0.	209.	0.	0.	165.	195.	0.	0.
80 A		0.	0.	0.	105.	0.	83.	83.	195.	0.	0.
L		0.	0.	0.	0.	0.	165.	0.	195.	0.	0.
R		0.	0.	0.	194.	0.	15.	105.	150.	0.	0.
90 A		0.	0.	0.	97.	0.	98.	53.	173.	0.	0.
L		0.	0.	0.	0.	0.	180.	0.	195.	0.	0.
R		0.	0.	0.	193.	0.	0.	210.	222.	0.	0.
100 A		0.	0.	0.	97.	0.	68.	105.	171.	0.	0.
L		0.	0.	0.	0.	0.	135.	0.	120.	0.	0.
R		0.	0.	0.	192.	0.	0.	165.	210.	0.	0.
110 A		0.	0.	0.	96.	0.	98.	83.	203.	0.	0.
L		0.	0.	0.	0.	0.	195.	0.	195.	0.	0.
R		0.	0.	0.	224.	0.	0.	225.	195.	0.	0.
120 A		0.	0.	0.	112.	0.	90.	113.	173.	0.	0.
L		0.	0.	0.	0.	0.	180.	0.	150.	0.	0.

RADIANCE VALUES ARE IN MICROWATTS. VA AND SA ARE IN DEGREES.

FIGURE 132 CONT.

IR NUMBER OF OBSERVATIONS AS A FUNCTION OF SUN AZIMUTH

FILTER 1 AT 1150 AST INSOL ANGLE 41.8 DEG
SPECTRAL BAND 2.50 TO 2.80 MICRONS ELEVATION 30.5 KM

	VA	0	10	20	30	40	50	60	70	80	90
SA											
	R	0.	0.	0.	104.	0.	0.	105.	120.	0.	0.
130	A	0.	0.	0.	52.	0.	90.	53.	150.	0.	0.
	L	0.	0.	0.	0.	0.	180.	0.	180.	0.	0.
	R	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
140	A	0.	0.	0.	0.	0.	75.	0.	83.	0.	0.
	L	0.	0.	0.	0.	0.	150.	0.	165.	0.	0.
	R	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
150	A	0.	0.	0.	0.	0.	90.	0.	75.	0.	0.
	L	0.	0.	0.	0.	0.	180.	0.	150.	0.	0.
	R	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
160	A	0.	0.	0.	0.	0.	68.	0.	75.	0.	0.
	L	0.	0.	0.	0.	0.	135.	0.	150.	0.	0.
	R	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
170	A	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
	L	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
	R	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
180	A	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
	L	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.

RADIANCE VALUES ARE IN MICROWATTS. VA AND SA ARE IN DEGREES.

FIGURE 132 CONT.

IR MEAN RADIANCE AS A FUNCTION OF SUN AZIMUTH

FILTER 1 AT 1150 AST INSOL ANGLE 41.8 DEG
SPECTRAL BAND 2.50 TO 2.80 MICRONS ELEVATION 30.5 KM

VA	0	10	20	30	40	50	60	70	80	90
SA										
R	0.	0.	0.	0.16	0.	0.	0.41	0.18	0.	0.
0 A	0.	0.	0.	0.17	0.	0.	0.50	0.18	0.	0.
L	0.	0.	0.	0.18	0.	0.	0.56	0.18	0.	0.
R	0.	0.	0.	0.18	0.	0.	0.31	0.17	0.	0.
10 A	0.	0.	0.	0.18	0.	0.	0.34	0.23	0.	0.
L	0.	0.	0.	0.18	0.	0.	0.38	0.28	0.	0.
R	0.	0.	0.	0.18	0.	0.	0.30	0.18	0.	0.
20 A	0.	0.	0.	0.18	0.	0.	0.30	0.20	0.	0.
L	0.	0.	0.	0.	0.	0.	0.	0.23	0.	0.
R	0.	0.	0.	0.18	0.	0.	0.32	0.37	0.	0.
30 A	0.	0.	0.	0.18	0.	0.16	0.32	0.29	0.	0.
L	0.	0.	0.	0.	0.	0.16	0.	0.20	0.	0.
R	0.	0.	0.	0.18	0.	0.	0.22	0.44	0.	0.
40 A	0.	0.	0.	0.18	0.	0.19	0.22	0.26	0.	0.
L	0.	0.	0.	0.	0.	0.19	0.	0.19	0.	0.
R	0.	0.	0.	0.18	0.	0.	0.18	0.55	0.	0.
50 A	0.	0.	0.	0.18	0.	0.17	0.18	0.38	0.	0.
L	0.	0.	0.	0.	0.	0.17	0.	0.20	0.	0.
R	0.	0.	0.	0.17	0.	0.	0.68	0.31	0.	0.
60 A	0.	0.	0.	0.17	0.	0.18	0.68	0.44	0.	0.
L	0.	0.	0.	0.	0.	0.18	0.	0.57	0.	0.

RADIANCE VALUES ARE IN MICROWATTS. VA AND SA ARE IN DEGREES.

FIGURE 133

IR MEAN RADIANCE AS A FUNCTION OF SUN AZINUTH

FILTER 1 AT 1150 AST INSOL ANGLE 41.8 DEG
SPECTRAL BAND 2.50 TO 2.80 MICRONS ELEVATION 30.5 KM

VA	0	10	20	30	40	50	60	70	80	90
SA										
R	0.	0.	0.	0.17	0.	0.	0.16	0.26	0.	0.
70 A	0.	0.	0.	0.17	0.	0.18	0.16	0.53	0.	0.
L	0.	0.	0.	0.	0.	0.18	0.	0.81	0.	0.
R	0.	0.	0.	0.18	0.	0.	0.20	0.38	0.	0.
80 A	0.	0.	0.	0.18	0.	0.20	0.20	0.45	0.	0.
L	0.	0.	0.	0.	0.	0.20	0.	0.52	0.	0.
R	0.	0.	0.	0.18	0.	0.15	0.18	0.64	0.	0.
90 A	0.	0.	0.	0.18	0.	0.20	0.18	0.71	0.	0.
L	0.	0.	0.	0.	0.	0.20	0.	0.76	0.	0.
R	0.	0.	0.	0.16	0.	0.	0.21	0.57	0.	0.
100 A	0.	0.	0.	0.16	0.	0.17	0.21	0.59	0.	0.
L	0.	0.	0.	0.	0.	0.17	0.	0.61	0.	0.
R	0.	0.	0.	0.18	0.	0.	0.21	0.42	0.	0.
110 A	0.	0.	0.	0.18	0.	0.20	0.21	0.57	0.	0.
L	0.	0.	0.	0.	0.	0.20	0.	0.72	0.	0.
R	0.	0.	0.	0.17	0.	0.	0.20	0.60	0.	0.
120 A	0.	0.	0.	0.17	0.	0.23	0.20	0.55	0.	0.
L	0.	0.	0.	0.	0.	0.23	0.	0.48	0.	0.

RADIANCE VALUES ARE IN MICROWATTS. VA AND SA ARE IN DEGREES.

FIGURE 133 CONT.

IR MEAN RADIANCE AS A FUNCTION OF SUN AZIMUTH

FILTER 1 AT 1150 AST INSOL ANGLE 41.8 DEG
SPECTRAL BAND 2.50 TO 2.80 MICRONS ELEVATION 30.5 KM

VA	0	10	20	30	40	50	60	70	80	90
SA										
R	0.	0.	0.	0.20	0.	0.	0.28	0.51	0.	0.
130 A	0.	0.	0.	0.20	0.	0.17	0.28	0.46	0.	0.
L	0.	0.	0.	0.	0.	0.17	0.	0.42	0.	0.
R	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
140 A	0.	0.	0.	0.	0.	0.15	0.	0.20	0.	0.
L	0.	0.	0.	0.	0.	0.15	0.	0.20	0.	0.
R	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
150 A	0.	0.	0.	0.	0.	0.17	0.	0.27	0.	0.
L	0.	0.	0.	0.	0.	0.17	0.	0.27	0.	0.
R	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
160 A	0.	0.	0.	0.	0.	0.19	0.	0.29	0.	0.
L	0.	0.	0.	0.	0.	0.19	0.	0.29	0.	0.
R	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
170 A	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
L	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
R	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
180 A	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
L	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.

RADIANCE VALUES ARE IN MICROWATTS. VA AND SA ARE IN DEGREES.

FIGURE 133 CONT.

IR RMS FLUCTUATION AS A FUNCTION OF SUN AZIMUTH

FILTER 1 AT 1150 AST INSOL ANGLE 41.8 DEG
SPECTRAL BAND 2.50 TO 2.80 MICRONS ELEVATION 30.5 KM

VA	0	10	20	30	40	50	60	70	80	90
SA										
R	0.	0.	0.	0.14	0.	0.	0.22	0.13	0.	0.
0 A	0.	0.	0.	0.19	0.	0.	0.34	0.18	0.	0.
L	0.	0.	0.	0.14	0.	0.	0.26	0.12	0.	0.
R	0.	0.	0.	0.14	0.	0.	0.19	0.13	0.	0.
10 A	0.	0.	0.	0.19	0.	0.	0.31	0.26	0.	0.
L	0.	0.	0.	0.14	0.	0.	0.24	0.22	0.	0.
R	0.	0.	0.	0.13	0.	0.	0.19	0.15	0.	0.
20 A	0.	0.	0.	0.13	0.	0.	0.19	0.23	0.	0.
L	0.	0.	0.	0.	0.	0.	0.	0.17	0.	0.
R	0.	0.	0.	0.13	0.	0.	0.21	0.33	0.	0.
30 A	0.	0.	0.	0.13	0.	0.13	0.21	0.36	0.	0.
L	0.	0.	0.	0.	0.	0.13	0.	0.15	0.	0.
R	0.	0.	0.	0.14	0.	0.	0.18	0.24	0.	0.
40 A	0.	0.	0.	0.14	0.	0.13	0.18	0.27	0.	0.
L	0.	0.	0.	0.	0.	0.13	0.	0.14	0.	0.
R	0.	0.	0.	0.14	0.	0.	0.14	0.23	0.	0.
50 A	0.	0.	0.	0.14	0.	0.13	0.14	0.27	0.	0.
L	0.	0.	0.	0.	0.	0.13	0.	0.14	0.	0.
R	0.	0.	0.	0.13	0.	0.	0.30	0.19	0.	0.
60 A	0.	0.	0.	0.13	0.	0.13	0.30	0.51	0.	0.
L	0.	0.	0.	0.	0.	0.13	0.	0.47	0.	0.

RADIANCE VALUES ARE IN MICROWATTS. VA AND SA ARE IN DEGREES.

FIGURE 134

IR RMS FLUCTUATION AS A FUNCTION OF SUN AZIMUTH

FILTER 1 AT 1150 AST INSOL ANGLE 41.8 DEG
SPECTRAL BAND 2.50 TO 2.80 MICRONS ELEVATION 30.5 KM

VA	0	10	20	30	40	50	60	70	80	90
SA										
R	0.	0.	0.	0.14	0.	0.	0.12	0.18	0.	0.
70 A	0.	0.	0.	0.14	0.	0.15	0.12	0.43	0.	0.
L	0.	0.	0.	0.	0.	0.15	0.	0.39	0.	0.
R	0.	0.	0.	0.13	0.	0.	0.15	0.22	0.	0.
80 A	0.	0.	0.	0.13	0.	0.13	0.15	0.32	0.	0.
L	0.	0.	0.	0.	0.	0.13	0.	0.23	0.	0.
R	0.	0.	0.	0.14	0.	0.14	0.15	0.26	0.	0.
90 A	0.	0.	0.	0.14	0.	0.21	0.15	0.38	0.	0.
L	0.	0.	0.	0.	0.	0.16	0.	0.27	0.	0.
R	0.	0.	0.	0.12	0.	0.	0.15	0.23	0.	0.
100 A	0.	0.	0.	0.12	0.	0.13	0.15	0.35	0.	0.
L	0.	0.	0.	0.	0.	0.13	0.	0.26	0.	0.
R	0.	0.	0.	0.15	0.	0.	0.15	0.23	0.	0.
110 A	0.	0.	0.	0.15	0.	0.14	0.15	0.44	0.	0.
L	0.	0.	0.	0.	0.	0.14	0.	0.37	0.	0.
R	0.	0.	0.	0.15	0.	0.	0.14	0.25	0.	0.
120 A	0.	0.	0.	0.15	0.	0.17	0.14	0.36	0.	0.
L	0.	0.	0.	0.	0.	0.17	0.	0.26	0.	0.

RADIANCE VALUES ARE IN MICROWATTS. VA AND SA ARE IN DEGREES.

FIGURE 134 CONT.

IR RMS FLUCTUATION AS A FUNCTION OF SUN AZIMUTH

FILTER 1 AT 1150 AST INSOL ANGLE 41.8 DEG
SPECTRAL BAND 2.50 TO 2.80 MICRONS ELEVATION 30.5 KM

	VA	0	10	20	30	40	50	60	70	80	90
SA											
	R	0.	0.	0.	0.15	0.	0.	0.20	0.24	0.	0.
130	A	0.	0.	0.	0.15	0.	0.13	0.20	0.34	0.	0.
	L	0.	0.	0.	0.	0.	0.13	0.	0.24	0.	0.
	R	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
140	A	0.	0.	0.	0.	0.	0.11	0.	0.14	0.	0.
	L	0.	0.	0.	0.	0.	0.11	0.	0.14	0.	0.
	R	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
150	A	0.	0.	0.	0.	0.	0.14	0.	0.18	0.	0.
	L	0.	0.	0.	0.	0.	0.14	0.	0.18	0.	0.
	R	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
160	A	0.	0.	0.	0.	0.	0.12	0.	0.18	0.	0.
	L	0.	0.	0.	0.	0.	0.12	0.	0.18	0.	0.
	R	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
170	A	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
	L	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
	R	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
180	A	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
	L	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.

RADIANCE VALUES ARE IN MICROWATTS. VA AND SA ARE IN DEGREES.

FIGURE 134 CONT.

IR NUMBER OF OBSERVATIONS AS A FUNCTION OF SCATTERING ANGLE

FILTER 1 AT 1150 AST INSOL ANGLE 41.8 DEG
SPECTRAL BAND 2.50 TO 2.80 MICRONS ELEVATION 30.5 KM

SA	VA	0	10	20	30	40	50	60	70	80	90
0		0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
10		0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
20		0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
30		0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
40		0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
50		0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
60		0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
70		0.	0.	0.	0.	0.	0.	0.	1620.	0.	0.
80		0.	0.	0.	0.	0.	0.	749.	720.	0.	0.
90		0.	0.	0.	0.	0.	120.	479.	735.	0.	0.
100		0.	0.	0.	0.	0.	478.	314.	570.	0.	0.
110		0.	0.	0.	825.	0.	360.	255.	552.	0.	0.
120		0.	0.	0.	493.	0.	315.	255.	555.	0.	0.
130		0.	0.	0.	537.	0.	285.	285.	435.	0.	0.
140		0.	0.	0.	430.	0.	285.	180.	300.	0.	0.
150		0.	0.	0.	194.	0.	240.	0.	90.	0.	0.
160		0.	0.	0.	0.	0.	285.	0.	0.	0.	0.
170		0.	0.	0.	0.	0.	30.	0.	0.	0.	0.
180		0.	0.	0.	0.	0.	0.	0.	0.	0.	0.

RADIANCE VALUES ARE IN MICROWATTS. VA AND SA ARE IN DEGREES.

FIGURE 135

IR MEAN RADIANCE AS A FUNCTION OF SCATTERING ANGLE

FILTER 1 AT 1150 AST						INSOL ANGLE 41.8 DEG				
SPECTRAL BAND 2.50 TO 2.80 MICRONS						ELEVATION 30.5 KM				
VA	0	10	20	30	40	50	60	70	80	90
SA										
0	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
10	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
20	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
30	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
40	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
50	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
60	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
70	0.	0.	0.	0.	0.	0.	0.	0.24	0.	0.
80	0.	0.	0.	0.	0.	0.	0.37	0.33	0.	0.
90	0.	0.	0.	0.	0.	0.15	0.23	0.52	0.	0.
100	0.	0.	0.	0.	0.	0.18	0.39	0.59	0.	0.
110	0.	0.	0.	0.18	0.	0.19	0.19	0.64	0.	0.
120	0.	0.	0.	0.18	0.	0.20	0.23	0.49	0.	0.
130	0.	0.	0.	0.18	0.	0.18	0.21	0.45	0.	0.
140	0.	0.	0.	0.17	0.	0.22	0.23	0.25	0.	0.
150	0.	0.	0.	0.19	0.	0.15	0.	0.29	0.	0.
160	0.	0.	0.	0.	0.	0.18	0.	0.	0.	0.
170	0.	0.	0.	0.	0.	0.19	0.	0.	0.	0.
180	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.

RADIANCE VALUES ARE IN MICROWATTS. VA AND SA ARE IN DEGREES.

FIGURE 136

IR RMS FLUCTUATION AS A FUNCTION OF SCATTERING ANGLE

FILTER 1 AT 1150 AST INSOL ANGLE 41.8 DEG
SPECTRAL BAND 2.50 TO 2.80 MICRONS ELEVATION 30.5 KM

SA	VA	0	10	20	30	40	50	60	70	80	90
0	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
10	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
20	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
30	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
40	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
50	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
60	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
70	0.	0.	0.	0.	0.	0.	0.	0.	0.21	0.	0.
80	0.	0.	0.	0.	0.	0.	0.	0.24	0.24	0.	0.
90	0.	0.	0.	0.	0.	0.	0.13	0.18	0.40	0.	0.
100	0.	0.	0.	0.	0.	0.	0.13	0.34	0.29	0.	0.
110	0.	0.	0.	0.14	0.	0.14	0.15	0.15	0.29	0.	0.
120	0.	0.	0.	0.14	0.	0.15	0.16	0.16	0.27	0.	0.
130	0.	0.	0.	0.13	0.	0.13	0.15	0.15	0.26	0.	0.
140	0.	0.	0.	0.14	0.	0.16	0.18	0.18	0.17	0.	0.
150	0.	0.	0.	0.15	0.	0.12	0.	0.19	0.	0.	0.
160	0.	0.	0.	0.	0.	0.13	0.	0.	0.	0.	0.
170	0.	0.	0.	0.	0.	0.14	0.	0.	0.	0.	0.
180	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.

RADIANCE VALUES ARE IN MICROWATTS. VA AND SA ARE IN DEGREES.

FIGURE 137

IR NUMBER OF OBSERVATIONS AS A FUNCTION OF SUN AZIMUTH

FILTER 9 AT 1159 AST INSOL ANGLE 41.8 DEG
SPECTRAL BAND 4.18 TO 4.97 MICRONS ELEVATION 30.5 KM

VA SA	0	10	20	30	40	50	60	70	80	90
R	0.	0.	0.	0.	60.	0.	0.	105.	0.	0.
0 A	0.	0.	0.	0.	90.	0.	0.	83.	0.	0.
L	0.	0.	0.	0.	120.	0.	0.	60.	0.	0.
R	0.	0.	0.	0.	195.	0.	0.	180.	0.	0.
10 A	0.	0.	0.	0.	173.	0.	0.	173.	0.	0.
L	0.	0.	0.	0.	150.	0.	0.	165.	0.	0.
R	0.	0.	0.	0.	210.	0.	0.	150.	0.	0.
20 A	0.	0.	0.	15.	105.	0.	45.	135.	0.	0.
L	0.	0.	0.	30.	0.	0.	90.	120.	0.	0.
R	0.	0.	0.	0.	180.	0.	0.	150.	0.	0.
30 A	0.	0.	0.	75.	90.	0.	83.	188.	0.	0.
L	0.	0.	0.	150.	0.	0.	165.	225.	0.	0.
R	0.	0.	0.	0.	165.	0.	0.	180.	0.	0.
40 A	0.	0.	0.	83.	83.	0.	60.	180.	0.	0.
L	0.	0.	0.	165.	0.	0.	119.	180.	0.	0.
R	0.	0.	0.	0.	210.	0.	0.	165.	0.	0.
50 A	0.	0.	0.	75.	105.	0.	90.	195.	0.	0.
L	0.	0.	0.	150.	0.	0.	180.	225.	0.	0.
R	0.	0.	0.	0.	180.	0.	0.	165.	0.	0.
60 A	0.	0.	0.	98.	90.	0.	120.	173.	0.	0.
L	0.	0.	0.	195.	0.	0.	240.	180.	0.	0.

RADIANCE VALUES ARE IN MICROWATTS. VA AND SA ARE IN DEGREES.

FIGURE 138

IR NUMBER OF OBSERVATIONS AS A FUNCTION OF SUN AZIMUTH

FILTER 9 AT 1159 AST INSOL ANGLE 41.8 DEG
SPECTRAL BAND 4.18 TO 4.97 MICRONS ELEVATION 30.5 KM

VA	0	10	20	30	40	50	60	70	80	90
SA										
R	0.	0.	0.	0.	165.	0.	0.	135.	0.	0.
70 A	0.	0.	0.	75.	83.	0.	90.	173.	0.	0.
L	0.	0.	0.	150.	0.	0.	180.	210.	0.	0.
R	0.	0.	0.	0.	225.	0.	0.	150.	0.	0.
80 A	0.	0.	0.	75.	113.	0.	98.	173.	0.	0.
L	0.	0.	0.	150.	0.	0.	195.	195.	0.	0.
R	0.	0.	0.	0.	180.	0.	0.	165.	0.	0.
90 A	0.	0.	0.	60.	90.	0.	90.	173.	0.	0.
L	0.	0.	0.	120.	0.	0.	180.	180.	0.	0.
R	0.	0.	0.	0.	195.	0.	0.	195.	0.	0.
100 A	0.	0.	0.	90.	98.	0.	105.	210.	0.	0.
L	0.	0.	0.	180.	0.	0.	210.	225.	0.	0.
R	0.	0.	0.	0.	210.	0.	0.	180.	0.	0.
110 A	0.	0.	0.	83.	105.	0.	98.	188.	0.	0.
L	0.	0.	0.	165.	0.	0.	195.	195.	0.	0.
R	0.	0.	0.	0.	210.	0.	0.	180.	0.	0.
120 A	0.	0.	0.	90.	105.	0.	105.	180.	0.	0.
L	0.	0.	0.	180.	0.	0.	210.	180.	0.	0.

RADIANCE VALUES ARE IN MICROWATTS. VA AND SA ARE IN DEGREES.

FIGURE 138 CONT.

IR NUMBER OF OBSERVATIONS AS A FUNCTION OF SUN AZIMUTH

FILTER 9 AT 1159 AST INSOL ANGLE 41.8 DEG
SPECTRAL BAND 4.18 TO 4.97 MICRONS ELEVATION 30.5 KM

	VA	0	10	20	30	40	50	60	70	80	90
SA											
	R	0.	0.	0.	0.	105.	0.	0.	30.	0.	0.
130	A	0.	0.	0.	90.	53.	0.	105.	128.	0.	0.
	L	0.	0.	0.	180.	0.	0.	210.	225.	0.	0.
	R	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
140	A	0.	0.	0.	90.	0.	0.	98.	75.	0.	0.
	L	0.	0.	0.	180.	0.	0.	195.	150.	0.	0.
	R	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
150	A	0.	0.	0.	68.	0.	0.	113.	82.	0.	0.
	L	0.	0.	0.	135.	0.	0.	225.	164.	0.	0.
	R	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
160	A	0.	0.	0.	83.	0.	0.	53.	75.	0.	0.
	L	0.	0.	0.	165.	0.	0.	105.	150.	0.	0.
	R	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
170	A	0.	0.	0.	0.	0.	0.	0.	8.	0.	0.
	L	0.	0.	0.	0.	0.	0.	0.	15.	0.	0.
	R	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
180	A	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
	L	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.

RADIANCE VALUES ARE IN MICROWATTS. VA AND SA ARE IN DEGREES.

FIGURE 138 CONT.

IR MEAN RADIANCE AS A FUNCTION OF SUN AZIMUTH

FILTER 9 AT 1159 AST INSOL ANGLE 41.8 DEG
SPECTRAL BAND 4.18 TO 4.97 MICRONS ELEVATION 30.5 KM

VA	0	10	20	30	40	50	60	70	80	90
SA										
R	0.	0.	0.	0.	33.41	0.	0.	33.14	0.	0.
0 A	0.	0.	0.	0.	34.01	0.	0.	33.22	0.	0.
L	0.	0.	0.	0.	34.31	0.	0.	33.34	0.	0.
R	0.	0.	0.	0.	33.67	0.	0.	32.79	0.	0.
10 A	0.	0.	0.	0.	33.37	0.	0.	33.00	0.	0.
L	0.	0.	0.	0.	32.97	0.	0.	33.22	0.	0.
R	0.	0.	0.	0.	32.81	0.	0.	33.20	0.	0.
20 A	0.	0.	0.	38.38	32.81	0.	28.52	33.00	0.	0.
L	0.	0.	0.	38.38	0.	0.	28.52	32.74	0.	0.
R	0.	0.	0.	0.	32.47	0.	0.	32.48	0.	0.
30 A	0.	0.	0.	37.76	32.47	0.	28.89	33.06	0.	0.
L	0.	0.	0.	37.76	0.	0.	28.89	33.44	0.	0.
R	0.	0.	0.	0.	30.53	0.	0.	32.83	0.	0.
40 A	0.	0.	0.	38.05	30.53	0.	29.35	32.90	0.	0.
L	0.	0.	0.	38.05	0.	0.	29.35	32.96	0.	0.
R	0.	0.	0.	0.	28.69	0.	0.	32.76	0.	0.
50 A	0.	0.	0.	37.55	28.69	0.	29.35	32.93	0.	0.
L	0.	0.	0.	37.55	0.	0.	29.35	33.06	0.	0.
R	0.	0.	0.	0.	29.26	0.	0.	33.35	0.	0.
60 A	0.	0.	0.	35.85	29.26	0.	31.34	33.35	0.	0.
L	0.	0.	0.	35.85	0.	0.	31.34	33.36	0.	0.

RADIANCE VALUES ARE IN MICROWATTS. VA AND SA ARE IN DEGREES.

FIGURE 139

IR MEAN RADIANCE AS A FUNCTION OF SUN AZIMUTH

FILTER 9 AT 1159 AST INSOL ANGLE 41.8 DEG
SPECTRAL BAND 4.18 TO 4.97 MICRONS ELEVATION 30.5 KM

VA	0	10	20	30	40	50	60	70	80	90
SA										
R	0.	0.	0.	0.	28.78	0.	0.	33.52	0.	0.
70 A	0.	0.	0.	37.11	28.78	0.	28.92	33.34	0.	0.
L	0.	0.	0.	37.11	0.	0.	28.92	33.23	0.	0.
R	0.	0.	0.	0.	29.64	0.	0.	33.67	0.	0.
80 A	0.	0.	0.	38.38	29.64	0.	31.13	33.34	0.	0.
L	0.	0.	0.	38.38	0.	0.	31.13	33.09	0.	0.
R	0.	0.	0.	0.	30.78	0.	0.	33.54	0.	0.
90 A	0.	0.	0.	32.43	30.78	0.	31.23	33.20	0.	0.
L	0.	0.	0.	32.43	0.	0.	31.23	32.89	0.	0.
R	0.	0.	0.	0.	30.13	0.	0.	34.03	0.	0.
100 A	0.	0.	0.	35.75	30.13	0.	30.95	33.65	0.	0.
L	0.	0.	0.	35.75	0.	0.	30.95	33.32	0.	0.
R	0.	0.	0.	0.	32.39	0.	0.	33.70	0.	0.
110 A	0.	0.	0.	34.76	32.39	0.	31.02	33.80	0.	0.
L	0.	0.	0.	34.76	0.	0.	31.02	33.88	0.	0.
R	0.	0.	0.	0.	32.29	0.	0.	33.44	0.	0.
120 A	0.	0.	0.	34.92	32.29	0.	31.07	33.45	0.	0.
L	0.	0.	0.	34.92	0.	0.	31.07	33.46	0.	0.

RADIANCE VALUES ARE IN MICROWATTS. VA AND SA ARE IN DEGREES.

FIGURE 139 CONT.

IR MEAN RADIANCE AS A FUNCTION OF SUN AZIMUTH

FILTER 9 AT 1159 AST INSOL ANGLE 41.8 DEG
SPECTRAL BAND 4.18 TO 4.97 MICRONS ELEVATION 30.5 KM

VA	0	10	20	30	40	50	60	70	80	90
SA										
R	0.	0.	0.	0.	32.92	0.	0.	33.27	0.	0.
130 A	0.	0.	0.	40.88	32.92	0.	28.60	33.38	0.	0.
L	0.	0.	0.	40.88	0.	0.	28.60	33.40	0.	0.
R	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
140 A	0.	0.	0.	38.86	0.	0.	28.28	33.34	0.	0.
L	0.	0.	0.	38.86	0.	0.	28.28	33.34	0.	0.
R	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
150 A	0.	0.	0.	35.50	0.	0.	28.40	33.77	0.	0.
L	0.	0.	0.	35.50	0.	0.	28.40	33.77	0.	0.
R	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
160 A	0.	0.	0.	35.79	0.	0.	30.69	33.47	0.	0.
L	0.	0.	0.	35.79	0.	0.	30.69	33.47	0.	0.
R	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
170 A	0.	0.	0.	0.	0.	0.	0.	33.14	0.	0.
L	0.	0.	0.	0.	0.	0.	0.	33.14	0.	0.
R	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
180 A	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
L	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.

RADIANCE VALUES ARE IN MICROWATTS. VA AND SA ARE IN DEGREES.

FIGURE 139 CONT.

IR RMS FLUCTUATION AS A FUNCTION OF SUN AZIMUTH

FILTER 9 AT 1159 AST INSOL ANGLE 41.8 DEG
SPECTRAL BAND 4.18 TO 4.97 MICRONS ELEVATION 30.5 KM

VA	0	10	20	30	40	50	60	70	80	90
SA										
R	0.	0.	0.	0.	0.97	0.	0.	0.87	0.	0.
0 A	0.	0.	0.	0.	1.43	0.	0.	1.28	0.	0.
L	0.	0.	0.	0.	1.05	0.	0.	0.94	0.	0.
R	0.	0.	0.	0.	1.00	0.	0.	0.92	0.	0.
10 A	0.	0.	0.	0.	1.56	0.	0.	1.51	0.	0.
L	0.	0.	0.	0.	1.19	0.	0.	1.20	0.	0.
R	0.	0.	0.	0.	1.35	0.	0.	0.94	0.	0.
20 A	0.	0.	0.	1.02	1.35	0.	0.99	1.32	0.	0.
L	0.	0.	0.	1.02	0.	0.	0.99	0.92	0.	0.
R	0.	0.	0.	0.	1.14	0.	0.	0.93	0.	0.
30 A	0.	0.	0.	1.04	1.14	0.	1.38	1.34	0.	0.
L	0.	0.	0.	1.04	0.	0.	1.38	0.96	0.	0.
R	0.	0.	0.	0.	1.59	0.	0.	0.93	0.	0.
40 A	0.	0.	0.	1.16	1.59	0.	2.08	1.38	0.	0.
L	0.	0.	0.	1.16	0.	0.	2.08	1.03	0.	0.
R	0.	0.	0.	0.	1.10	0.	0.	0.94	0.	0.
50 A	0.	0.	0.	1.51	1.10	0.	1.53	1.39	0.	0.
L	0.	0.	0.	1.51	0.	0.	1.53	1.03	0.	0.
R	0.	0.	0.	0.	1.38	0.	0.	0.90	0.	0.
60 A	0.	0.	0.	1.12	1.38	0.	1.11	1.27	0.	0.
L	0.	0.	0.	1.12	0.	0.	1.11	0.89	0.	0.

RADIANCE VALUES ARE IN MICROWATTS. VA AND SA ARE IN DEGREES.

FIGURE 140

IR RMS FLUCTUATION AS A FUNCTION OF SUN AZIMUTH

FILTER 9 AT 1159 AST INSOL ANGLE 41.8 DEG
SPECTRAL BAND 4.18 TO 4.97 MICRONS ELEVATION 30.5 KM

VA	0	10	20	30	40	50	60	70	80	90
SA										
R	0.	0.	0.	0.	1.48	0.	0.	0.90	0.	0.
70 A	0.	0.	0.	1.11	1.48	0.	1.17	1.35	0.	0.
L	0.	0.	0.	1.11	0.	0.	1.17	1.01	0.	0.
R	0.	0.	0.	0.	1.94	0.	0.	0.89	0.	0.
80 A	0.	0.	0.	1.64	1.94	0.	1.21	1.32	0.	0.
L	0.	0.	0.	1.64	0.	0.	1.21	0.97	0.	0.
R	0.	0.	0.	0.	1.98	0.	0.	0.89	0.	0.
90 A	0.	0.	0.	2.70	1.98	0.	1.34	1.30	0.	0.
L	0.	0.	0.	2.70	0.	0.	1.34	0.95	0.	0.
R	0.	0.	0.	0.	1.65	0.	0.	0.91	0.	0.
100 A	0.	0.	0.	1.67	1.65	0.	1.47	1.28	0.	0.
L	0.	0.	0.	1.67	0.	0.	1.47	0.91	0.	0.
R	0.	0.	0.	0.	1.17	0.	0.	0.89	0.	0.
110 A	0.	0.	0.	1.15	1.17	0.	1.93	1.23	0.	0.
L	0.	0.	0.	1.15	0.	0.	1.93	0.85	0.	0.
R	0.	0.	0.	0.	1.11	0.	0.	0.91	0.	0.
120 A	0.	0.	0.	4.76	1.11	0.	1.14	1.29	0.	0.
L	0.	0.	0.	4.76	0.	0.	1.14	0.92	0.	0.

RADIANCE VALUES ARE IN MICROWATTS. VA AND SA ARE IN DEGREES.

FIGURE 140 CONT.

IR RMS FLUCTUATION AS A FUNCTION OF SUN AZIMUTH

FILTER 9 AT 1159 AST INSOL ANGLE 41.8 DEG
SPECTRAL BAND 4.18 TO 4.97 MICRONS ELEVATION 30.5 KM

VA	0	10	20	30	40	50	60	70	80	90
SA										
R	0.	0.	0.	0.	1.03	0.	0.	0.89	0.	0.
130 A	0.	0.	0.	1.42	1.03	0.	1.08	1.24	0.	0.
L	0.	0.	0.	1.42	0.	0.	1.08	0.87	0.	0.
R	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
140 A	0.	0.	0.	1.26	0.	0.	0.99	0.91	0.	0.
L	0.	0.	0.	1.26	0.	0.	0.99	0.91	0.	0.
R	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
150 A	0.	0.	0.	1.64	0.	0.	1.07	0.84	0.	0.
L	0.	0.	0.	1.64	0.	0.	1.07	0.84	0.	0.
R	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
160 A	0.	0.	0.	1.35	0.	0.	1.24	0.91	0.	0.
L	0.	0.	0.	1.35	0.	0.	1.24	0.91	0.	0.
R	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
170 A	0.	0.	0.	0.	0.	0.	0.	0.86	0.	0.
L	0.	0.	0.	0.	0.	0.	0.	0.86	0.	0.
R	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
180 A	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
L	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.

RADIANCE VALUES ARE IN MICROWATTS. VA AND SA ARE IN DEGREES.

FIGURE 140 CONT.

IR NUMBER OF OBSERVATIONS AS A FUNCTION OF SCATTERING ANGLE

FILTER 9 AT 1159 AST INSOL ANGLE 41.8 DEG
SPECTRAL BAND 4.18 TO 4.97 MICRONS ELEVATION 30.5 KM

SA	VA	0	10	20	30	40	50	60	70	80	90
0		0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
10		0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
20		0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
30		0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
40		0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
50		0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
60		0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
70		0.	0.	0.	0.	0.	0.	0.	1320.	0.	0.
80		0.	0.	0.	0.	0.	0.	210.	765.	0.	0.
90		0.	0.	0.	0.	630.	0.	389.	630.	0.	0.
100		0.	0.	0.	0.	690.	0.	390.	525.	0.	0.
110		0.	0.	0.	315.	360.	0.	315.	555.	0.	0.
120		0.	0.	0.	510.	375.	0.	330.	585.	0.	0.
130		0.	0.	0.	375.	345.	0.	300.	360.	0.	0.
140		0.	0.	0.	360.	315.	0.	300.	299.	0.	0.
150		0.	0.	0.	390.	45.	0.	360.	135.	0.	0.
160		0.	0.	0.	345.	0.	0.	105.	0.	0.	0.
170		0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
180		0.	0.	0.	0.	0.	0.	0.	0.	0.	0.

RADIANCE VALUES ARE IN MICROWATTS. VA AND SA ARE IN DEGREES.

FIGURE 141

IR MEAN RADIANCE AS A FUNCTION OF SCATTERING ANGLE

FILTER 9 AT 1159 AST INSOL ANGLE 41.8 DEG
SPECTRAL BAND 4.18 TO 4.97 MICRONS ELEVATION 30.5 KM

VA	0	10	20	30	40	50	60	70	80	90
SA										
0	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
10	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
20	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
30	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
40	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
50	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
60	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
70	0.	0.	0.	0.	0.	0.	0.	33.06	0.	0.
80	0.	0.	0.	0.	0.	0.	28.89	32.97	0.	0.
90	0.	0.	0.	0.	33.57	0.	29.36	33.29	0.	0.
100	0.	0.	0.	0.	30.68	0.	30.22	33.34	0.	0.
110	0.	0.	0.	37.88	28.83	0.	31.46	33.64	0.	0.
120	0.	0.	0.	36.86	30.42	0.	31.20	33.64	0.	0.
130	0.	0.	0.	36.04	31.22	0.	30.64	33.37	0.	0.
140	0.	0.	0.	33.89	32.42	0.	28.75	33.58	0.	0.
150	0.	0.	0.	39.98	32.92	0.	28.37	33.40	0.	0.
160	0.	0.	0.	35.94	0.	0.	30.69	0.	0.	0.
170	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
180	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.

RADIANCE VALUES ARE IN MICROWATTS. VA AND SA ARE IN DEGREES.

FIGURE 142

IR RMS FLUCTUATION AS A FUNCTION OF SCATTERING ANGLE

FILTER 9 AT 1159 AST INSOL ANGLE 41.8 DEG
SPECTRAL BAND 4.18 TO 4.97 MICRONS ELEVATION 30.5 KM

VA SA	0	10	20	30	40	50	60	70	80	90
0	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
10	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
20	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
30	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
40	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
50	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
60	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
70	0.	0.	0.	0.	0.	0.	0.	1.02	0.	0.
80	0.	0.	0.	0.	0.	0.	1.28	0.99	0.	0.
90	0.	0.	0.	0.	1.14	0.	1.76	0.98	0.	0.
100	0.	0.	0.	0.	2.02	0.	1.67	0.96	0.	0.
110	0.	0.	0.	1.08	1.46	0.	1.09	0.97	0.	0.
120	0.	0.	0.	1.52	1.93	0.	1.60	0.91	0.	0.
130	0.	0.	0.	3.21	1.86	0.	1.47	0.88	0.	0.
140	0.	0.	0.	2.22	1.10	0.	1.28	0.90	0.	0.
150	0.	0.	0.	2.12	0.98	0.	1.04	0.91	0.	0.
160	0.	0.	0.	1.62	0.	0.	1.24	0.	0.	0.
170	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
180	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.

RADIANCE VALUES ARE IN MICROWATTS. VA AND SA ARE IN DEGREES.

FIGURE 143

IR NUMBER OF OBSERVATIONS AS A FUNCTION OF SUN AZIMUTH

FILTER 8 AT 1205 AST INSOL ANGLE 41.9 DEG
SPECTRAL BAND 3.42 TO 4.81 MICRONS ELEVATION 30.5 KM

VA	0	10	20	30	40	50	60	70	80	90
SA										
R	0.	0.	0.	0.	105.	0.	0.	60.	0.	0.
0 A	0.	0.	0.	0.	90.	0.	0.	83.	0.	0.
L	0.	0.	0.	0.	75.	0.	0.	105.	0.	0.
R	0.	0.	0.	0.	165.	0.	0.	210.	0.	0.
10 A	0.	0.	0.	0.	188.	0.	0.	188.	0.	0.
L	0.	0.	0.	0.	210.	0.	0.	165.	0.	0.
R	0.	0.	0.	0.	210.	0.	0.	195.	0.	0.
20 A	0.	0.	0.	0.	120.	0.	0.	173.	0.	0.
L	0.	0.	0.	0.	30.	0.	0.	150.	0.	0.
R	0.	0.	0.	0.	195.	0.	0.	210.	0.	0.
30 A	0.	0.	0.	83.	98.	0.	0.	210.	0.	0.
L	0.	0.	0.	165.	0.	0.	0.	210.	0.	0.
R	0.	0.	0.	0.	195.	0.	0.	180.	0.	0.
40 A	0.	0.	0.	53.	98.	0.	0.	180.	0.	0.
L	0.	0.	0.	105.	0.	0.	0.	180.	0.	0.
R	0.	0.	0.	0.	165.	0.	0.	180.	0.	0.
50 A	0.	0.	0.	83.	83.	0.	0.	188.	0.	0.
L	0.	0.	0.	165.	0.	0.	0.	195.	0.	0.
R	0.	0.	0.	0.	165.	0.	0.	210.	0.	0.
60 A	0.	0.	0.	98.	83.	0.	0.	203.	0.	0.
L	0.	0.	0.	195.	0.	0.	0.	195.	0.	0.

RADIANCE VALUES ARE IN MICROWATTS. VA AND SA ARE IN DEGREES.

FIGURE 144

IR NUMBER OF OBSERVATIONS AS A FUNCTION OF SUN AZIMUTH

FILTER 8 AT 1205 AST INSOL ANGLE 41.9 DEG
SPECTRAL BAND 3.42 TO 4.81 MICRONS ELEVATION 30.5 KM

VA	0	10	20	30	40	50	60	70	80	90
SA										
R	0.	0.	0.	0.	165.	0.	0.	150.	0.	0.
70 A	0.	0.	0.	90.	83.	0.	0.	180.	0.	0.
L	0.	0.	0.	180.	0.	0.	0.	210.	0.	0.
R	0.	0.	0.	0.	180.	0.	0.	165.	0.	0.
80 A	0.	0.	0.	90.	90.	0.	0.	180.	0.	0.
L	0.	0.	0.	180.	0.	0.	0.	195.	0.	0.
R	0.	0.	0.	0.	165.	0.	0.	135.	0.	0.
90 A	0.	0.	0.	90.	83.	0.	0.	165.	0.	0.
L	0.	0.	0.	180.	0.	0.	0.	195.	0.	0.
R	0.	0.	0.	0.	165.	0.	0.	180.	0.	0.
100 A	0.	0.	0.	90.	83.	0.	0.	210.	0.	0.
L	0.	0.	0.	180.	0.	0.	0.	240.	0.	0.
R	0.	0.	0.	0.	180.	0.	0.	165.	0.	0.
110 A	0.	0.	0.	83.	90.	0.	0.	173.	0.	0.
L	0.	0.	0.	165.	0.	0.	0.	180.	0.	0.
R	0.	0.	0.	0.	90.	0.	0.	165.	0.	0.
120 A	0.	0.	0.	83.	45.	0.	0.	188.	0.	0.
L	0.	0.	0.	165.	0.	0.	0.	210.	0.	0.

RADIANCE VALUES ARE IN MICROWATTS. VA AND SA ARE IN DEGREES.

FIGURE 144 CONT.

IR NUMBER OF OBSERVATIONS AS A FUNCTION OF SUN AZINUTH

FILTER 8 AT 1205 AST INSOL ANGLE 41.9 DEG
SPECTRAL BAND 3.42 TO 4.81 MICRONS ELEVATION 30.5 KM

VA	0	10	20	30	40	50	60	70	80	90
SA										
R	0.	0.	0.	0.	0.	0.	0.	75.	0.	0.
130 A	0.	0.	0.	83.	0.	0.	0.	135.	0.	0.
L	0.	0.	0.	165.	0.	0.	0.	195.	0.	0.
R	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
140 A	0.	0.	0.	98.	0.	0.	0.	82.	0.	0.
L	0.	0.	0.	195.	0.	0.	0.	164.	0.	0.
R	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
150 A	0.	0.	0.	83.	0.	0.	0.	83.	0.	0.
L	0.	0.	0.	165.	0.	0.	0.	165.	0.	0.
R	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
160 A	0.	0.	0.	90.	0.	0.	0.	90.	0.	0.
L	0.	0.	0.	180.	0.	0.	0.	180.	0.	0.
R	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
170 A	0.	0.	0.	8.	0.	0.	0.	15.	0.	0.
L	0.	0.	0.	15.	0.	0.	0.	30.	0.	0.
R	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
180 A	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
L	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.

RADIANCE VALUES ARE IN MICROWATTS. VA AND SA ARE IN DEGREES.

FIGURE 144 CONT.

IR MEAN RADIANCE AS A FUNCTION OF SUN AZINUTH

FILTER 8 AT 1205 AST INSOL ANGLE 41.9 DEG
SPECTRAL BAND 3.42 TO 4.81 MICRONS ELEVATION 30.5 KM

VA	0	10	20	30	40	50	60	70	80	90
SA										
R	0.	0.	0.	0.	35.34	0.	0.	24.83	0.	0.
0 A	0.	0.	0.	0.	35.07	0.	0.	23.62	0.	0.
L	0.	0.	0.	0.	34.70	0.	0.	22.93	0.	0.
R	0.	0.	0.	0.	34.74	0.	0.	20.29	0.	0.
10 A	0.	0.	0.	0.	34.31	0.	0.	20.07	0.	0.
L	0.	0.	0.	0.	33.98	0.	0.	19.78	0.	0.
R	0.	0.	0.	0.	36.52	0.	0.	19.21	0.	0.
20 A	0.	0.	0.	0.	35.79	0.	0.	20.28	0.	0.
L	0.	0.	0.	0.	30.65	0.	0.	21.68	0.	0.
R	0.	0.	0.	0.	36.34	0.	0.	17.24	0.	0.
30 A	0.	0.	0.	36.86	36.34	0.	0.	17.95	0.	0.
L	0.	0.	0.	36.86	0.	0.	0.	18.65	0.	0.
R	0.	0.	0.	0.	33.83	0.	0.	16.34	0.	0.
40 A	0.	0.	0.	36.20	33.83	0.	0.	18.33	0.	0.
L	0.	0.	0.	36.20	0.	0.	0.	20.32	0.	0.
R	0.	0.	0.	0.	33.63	0.	0.	16.05	0.	0.
50 A	0.	0.	0.	40.12	33.63	0.	0.	18.72	0.	0.
L	0.	0.	0.	40.12	0.	0.	0.	21.19	0.	0.
R	0.	0.	0.	0.	32.68	0.	0.	17.75	0.	0.
60 A	0.	0.	0.	40.60	32.68	0.	0.	19.22	0.	0.
L	0.	0.	0.	40.60	0.	0.	0.	20.81	0.	0.

RADIANCE VALUES ARE IN MICROWATTS. VA AND SA ARE IN DEGREES.

FIGURE 145

IR MEAN RADIANCE AS A FUNCTION OF SUN AZIMUTH

FILTER 8 AT 1205 AST INSOL ANGLE 41.9 DEG
SPECTRAL BAND 3.42 TO 4.81 MICRONS ELEVATION 30.5 KM

VA	0	10	20	30	40	50	60	70	80	90
SA										
R	0.	0.	0.	0.	35.86	0.	0.	18.12	0.	0.
70 A	0.	0.	0.	40.80	35.86	0.	0.	18.26	0.	0.
L	0.	0.	0.	40.80	0.	0.	0.	18.36	0.	0.
R	0.	0.	0.	0.	38.45	0.	0.	17.41	0.	0.
80 A	0.	0.	0.	42.42	38.45	0.	0.	17.08	0.	0.
L	0.	0.	0.	42.42	0.	0.	0.	16.80	0.	0.
R	0.	0.	0.	0.	37.50	0.	0.	16.03	0.	0.
90 A	0.	0.	0.	41.87	37.50	0.	0.	16.02	0.	0.
L	0.	0.	0.	41.87	0.	0.	0.	16.00	0.	0.
R	0.	0.	0.	0.	37.00	0.	0.	16.17	0.	0.
100 A	0.	0.	0.	40.40	37.00	0.	0.	16.04	0.	0.
L	0.	0.	0.	40.40	0.	0.	0.	15.94	0.	0.
R	0.	0.	0.	0.	36.23	0.	0.	15.99	0.	0.
110 A	0.	0.	0.	40.91	36.23	0.	0.	16.04	0.	0.
L	0.	0.	0.	40.91	0.	0.	0.	16.08	0.	0.
R	0.	0.	0.	0.	36.49	0.	0.	15.93	0.	0.
120 A	0.	0.	0.	39.99	36.49	0.	0.	16.38	0.	0.
L	0.	0.	0.	39.99	0.	0.	0.	16.73	0.	0.

RADIANCE VALUES ARE IN MICROWATTS. VA AND SA ARE IN DEGREES.

FIGURE 145 CONT.

IR MEAN RADIANCE AS A FUNCTION OF SUN AZIMUTH

FILTER 8 AT 1205 AST INSOL ANGLE 41.9 DEG
SPECTRAL BAND 3.42 TO 4.81 MICRONS ELEVATION 30.5 KM

VA	0	10	20	30	40	50	60	70	80	90
SA										
R	0.	0.	0.	0.	0.	0.	0.	16.01	0.	0.
130 A	0.	0.	0.	39.14	0.	0.	0.	15.99	0.	0.
L	0.	0.	0.	39.14	0.	0.	0.	15.99	0.	0.
R	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
140 A	0.	0.	0.	39.13	0.	0.	0.	15.87	0.	0.
L	0.	0.	0.	39.13	0.	0.	0.	15.87	0.	0.
R	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
150 A	0.	0.	0.	39.56	0.	0.	0.	15.88	0.	0.
L	0.	0.	0.	39.56	0.	0.	0.	15.88	0.	0.
R	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
160 A	0.	0.	0.	39.69	0.	0.	0.	17.21	0.	0.
L	0.	0.	0.	39.69	0.	0.	0.	17.21	0.	0.
R	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
170 A	0.	0.	0.	38.88	0.	0.	0.	17.69	0.	0.
L	0.	0.	0.	38.88	0.	0.	0.	17.69	0.	0.
R	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
180 A	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
L	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.

RADIANCE VALUES ARE IN MICROWATTS. VA AND SA ARE IN DEGREES.

FIGURE 145 CONT.

IR RMS FLUCTUATION AS A FUNCTION OF SUN AZIMUTH

FILTER 8 AT 1205 AST INSOL ANGLE 41.9 DEG
SPECTRAL BAND 3.42 TO 4.81 MICRONS ELEVATION 30.5 KM

VA	0	10	20	30	40	50	60	70	80	90
SA										
R	0.	0.	0.	0.	0.98	0.	0.	2.27	0.	0.
0 A	0.	0.	0.	0.	1.23	0.	0.	3.38	0.	0.
L	0.	0.	0.	0.	0.74	0.	0.	2.50	0.	0.
R	0.	0.	0.	0.	0.66	0.	0.	2.24	0.	0.
10 A	0.	0.	0.	0.	2.21	0.	0.	3.92	0.	0.
L	0.	0.	0.	0.	2.11	0.	0.	3.22	0.	0.
R	0.	0.	0.	0.	0.40	0.	0.	2.36	0.	0.
20 A	0.	0.	0.	0.	1.39	0.	0.	4.90	0.	0.
L	0.	0.	0.	0.	1.33	0.	0.	4.29	0.	0.
R	0.	0.	0.	0.	0.57	0.	0.	2.01	0.	0.
30 A	0.	0.	0.	1.45	0.57	0.	0.	2.97	0.	0.
L	0.	0.	0.	1.45	0.	0.	0.	2.18	0.	0.
R	0.	0.	0.	0.	0.84	0.	0.	1.12	0.	0.
40 A	0.	0.	0.	1.79	0.84	0.	0.	2.66	0.	0.
L	0.	0.	0.	1.79	0.	0.	0.	2.41	0.	0.
R	0.	0.	0.	0.	0.60	0.	0.	1.04	0.	0.
50 A	0.	0.	0.	0.56	0.60	0.	0.	2.48	0.	0.
L	0.	0.	0.	0.56	0.	0.	0.	2.26	0.	0.
R	0.	0.	0.	0.	1.40	0.	0.	1.68	0.	0.
60 A	0.	0.	0.	0.74	1.40	0.	0.	3.15	0.	0.
L	0.	0.	0.	0.74	0.	0.	0.	2.67	0.	0.

RADIANCE VALUES ARE IN MICROWATTS. VA AND SA ARE IN DEGREES.

FIGURE 146

IR RMS FLUCTUATION AS A FUNCTION OF SUN AZIMUTH

FILTER 8 AT 1205 AST INSOL ANGLE 41.9 DEG
SPECTRAL BAND 3.42 TO 4.81 MICRONS ELEVATION 30.5 KM

VA	0	10	20	30	40	50	60	70	80	90
SA										
R	0.	0.	0.	0.	2.42	0.	0.	1.23	0.	0.
70 A	0.	0.	0.	0.60	2.42	0.	0.	2.76	0.	0.
L	0.	0.	0.	0.60	0.	0.	0.	2.48	0.	0.
R	0.	0.	0.	0.	1.11	0.	0.	1.41	0.	0.
80 A	0.	0.	0.	1.07	1.11	0.	0.	2.31	0.	0.
L	0.	0.	0.	1.07	0.	0.	0.	1.83	0.	0.
R	0.	0.	0.	0.	0.87	0.	0.	1.01	0.	0.
90 A	0.	0.	0.	0.66	0.87	0.	0.	1.51	0.	0.
L	0.	0.	0.	0.66	0.	0.	0.	1.12	0.	0.
R	0.	0.	0.	0.	0.54	0.	0.	1.04	0.	0.
100 A	0.	0.	0.	0.54	0.54	0.	0.	1.53	0.	0.
L	0.	0.	0.	0.54	0.	0.	0.	1.12	0.	0.
R	0.	0.	0.	0.	0.35	0.	0.	1.01	0.	0.
110 A	0.	0.	0.	0.62	0.35	0.	0.	1.59	0.	0.
L	0.	0.	0.	0.62	0.	0.	0.	1.23	0.	0.
R	0.	0.	0.	0.	0.69	0.	0.	0.99	0.	0.
120 A	0.	0.	0.	0.45	0.69	0.	0.	1.58	0.	0.
L	0.	0.	0.	0.45	0.	0.	0.	1.24	0.	0.

RADIANCE VALUES ARE IN MICROWATTS. VA AND SA ARE IN DEGREES.

FIGURE 146 CONT.

IR RMS FLUCTUATION AS A FUNCTION OF SUN AZIMUTH

FILTER 8 AT 1205 AST INSOL ANGLE 41.9 DEG
SPECTRAL BAND 3.42 TO 4.81 MICRONS ELEVATION 30.5 KM

	VA	0	10	20	30	40	50	60	70	80	90
SA											
	R	0.	0.	0.	0.	0.	0.	0.	1.18	0.	0.
130	A	0.	0.	0.	1.13	0.	0.	0.	1.65	0.	0.
	L	0.	0.	0.	1.13	0.	0.	0.	1.15	0.	0.
	R	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
140	A	0.	0.	0.	0.66	0.	0.	0.	2.03	0.	0.
	L	0.	0.	0.	0.66	0.	0.	0.	2.03	0.	0.
	R	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
150	A	0.	0.	0.	1.05	0.	0.	0.	1.08	0.	0.
	L	0.	0.	0.	1.05	0.	0.	0.	1.08	0.	0.
	R	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
160	A	0.	0.	0.	0.65	0.	0.	0.	1.57	0.	0.
	L	0.	0.	0.	0.65	0.	0.	0.	1.57	0.	0.
	R	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
170	A	0.	0.	0.	0.57	0.	0.	0.	1.00	0.	0.
	L	0.	0.	0.	0.57	0.	0.	0.	1.00	0.	0.
	R	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
180	A	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
	L	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.

RADIANCE VALUES ARE IN MICROWATTS. VA AND SA ARE IN DEGREES.

FIGURE 146 CONT.

IR NUMBER OF OBSERVATIONS AS A FUNCTION OF SCATTERING ANGLE

FILTER 8 AT 1205 AST INSOL ANGLE 41.9 DEG
SPECTRAL BAND 3.42 TO 4.81 MICRONS ELEVATION 30.5 KM

VA	0	10	20	30	40	50	60	70	80	90
SA										
0	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
10	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
20	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
30	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
40	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
50	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
60	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
70	0.	0.	0.	0.	0.	0.	0.	1515.	0.	0.
80	0.	0.	0.	0.	0.	0.	0.	750.	0.	0.
90	0.	0.	0.	0.	735.	0.	0.	600.	0.	0.
100	0.	0.	0.	0.	630.	0.	0.	570.	0.	0.
110	0.	0.	0.	240.	345.	0.	0.	555.	0.	0.
120	0.	0.	0.	585.	315.	0.	0.	570.	0.	0.
130	0.	0.	0.	420.	315.	0.	0.	360.	0.	0.
140	0.	0.	0.	375.	120.	0.	0.	374.	0.	0.
150	0.	0.	0.	360.	0.	0.	0.	150.	0.	0.
160	0.	0.	0.	420.	0.	0.	0.	0.	0.	0.
170	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
180	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.

RADIANCE VALUES ARE IN MICROWATTS. VA AND SA ARE IN DEGREES.

FIGURE 147

IR MEAN RADIANCE AS A FUNCTION OF SCATTERING ANGLE

FILTER 8 AT 1205 AST INSOL ANGLE 41.9 DEG
SPECTRAL BAND 3.42 TO 4.81 MICRONS ELEVATION 30.5 KM

VA SA	0	10	20	30	40	50	60	70	80	90
0	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
10	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
20	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
30	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
40	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
50	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
60	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
70	0.	0.	0.	0.	0.	0.	0.	19.83	0.	0.
80	0.	0.	0.	0.	0.	0.	0.	18.61	0.	0.
90	0.	0.	0.	0.	34.80	0.	0.	18.30	0.	0.
100	0.	0.	0.	0.	34.76	0.	0.	16.56	0.	0.
110	0.	0.	0.	36.39	34.87	0.	0.	16.07	0.	0.
120	0.	0.	0.	40.46	37.83	0.	0.	16.13	0.	0.
130	0.	0.	0.	41.87	36.65	0.	0.	16.14	0.	0.
140	0.	0.	0.	40.49	36.40	0.	0.	15.89	0.	0.
150	0.	0.	0.	39.29	0.	0.	0.	17.84	0.	0.
160	0.	0.	0.	39.50	0.	0.	0.	0.	0.	0.
170	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
180	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.

RADIANCE VALUES ARE IN MICROWATTS. VA AND SA ARE IN DEGREES.

FIGURE 148

IR RMS FLUCTUATION AS A FUNCTION OF SCATTERING ANGLE

FILTER 8 AT 1205 AST INSOL ANGLE 41.9 DEG
SPECTRAL BAND 3.42 TO 4.81 MICRONS ELEVATION 30.5 KM

VA	0	10	20	30	40	50	60	70	80	90
SA										
0	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
10	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
20	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
30	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
40	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
50	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
60	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
70	0.	0.	0.	0.	0.	0.	0.	3.26	0.	0.
80	0.	0.	0.	0.	0.	0.	0.	3.03	0.	0.
90	0.	0.	0.	0.	1.79	0.	0.	2.04	0.	0.
100	0.	0.	0.	0.	1.55	0.	0.	1.49	0.	0.
110	0.	0.	0.	1.56	2.83	0.	0.	1.09	0.	0.
120	0.	0.	0.	0.91	1.01	0.	0.	1.17	0.	0.
130	0.	0.	0.	1.07	0.59	0.	0.	1.20	0.	0.
140	0.	0.	0.	0.63	0.65	0.	0.	1.57	0.	0.
150	0.	0.	0.	0.88	0.	0.	0.	1.28	0.	0.
160	0.	0.	0.	0.91	0.	0.	0.	0.	0.	0.
170	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
180	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.

RADIANCE VALUES ARE IN MICROWATTS. VA AND SA ARE IN DEGREES.

FIGURE 149

IR NUMBER OF OBSERVATIONS AS A FUNCTION OF SUN AZIMUTH

FILTER 7 AT 1210 AST INSOL ANGLE 41.9 DEG
SPECTRAL BAND 2.54 TO 2.89 MICRONS ELEVATION 30.5 KM

VA	0	10	20	30	40	50	60	70	80	90
SA										
R	0.	0.	0.	105.	0.	0.	75.	75.	0.	0.
0 A	0.	0.	0.	98.	0.	0.	83.	82.	0.	0.
L	0.	0.	0.	90.	0.	0.	90.	89.	0.	0.
R	0.	0.	0.	195.	0.	0.	195.	165.	0.	0.
10 A	0.	0.	0.	195.	0.	0.	188.	180.	0.	0.
L	0.	0.	0.	194.	0.	0.	180.	195.	0.	0.
R	0.	0.	0.	210.	0.	0.	195.	165.	0.	0.
20 A	0.	0.	0.	105.	0.	0.	113.	128.	0.	0.
L	0.	0.	0.	0.	0.	0.	30.	90.	0.	0.
R	0.	0.	0.	224.	0.	0.	180.	178.	0.	0.
30 A	0.	0.	0.	112.	0.	90.	90.	172.	0.	0.
L	0.	0.	0.	0.	0.	180.	0.	165.	0.	0.
R	0.	0.	0.	195.	0.	0.	180.	165.	0.	0.
40 A	0.	0.	0.	98.	0.	83.	90.	173.	0.	0.
L	0.	0.	0.	0.	0.	165.	0.	180.	0.	0.
R	0.	0.	0.	210.	0.	0.	165.	195.	0.	0.
50 A	0.	0.	0.	105.	0.	82.	83.	188.	0.	0.
L	0.	0.	0.	0.	0.	163.	0.	180.	0.	0.
R	0.	0.	0.	180.	0.	0.	120.	165.	0.	0.
60 A	0.	0.	0.	90.	0.	90.	60.	158.	0.	0.
L	0.	0.	0.	0.	0.	179.	0.	150.	0.	0.

RADIANCE VALUES ARE IN MICROWATTS. VA AND SA ARE IN DEGREES.

FIGURE 150

IR NUMBER OF OBSERVATIONS AS A FUNCTION OF SUN AZIMUTH

FILTER 7 AT 1210 AST INSOL ANGLE 41.9 DEG
SPECTRAL BAND 2.54 TO 2.89 MICRONS ELEVATION 30.5 KM

VA SA	0	10	20	30	40	50	60	70	80	90
R	0.	0.	0.	210.	0.	0.	150.	180.	0.	0.
70 A	0.	0.	0.	105.	0.	90.	75.	173.	0.	0.
L	0.	0.	0.	0.	0.	180.	0.	165.	0.	0.
R	0.	0.	0.	180.	0.	0.	195.	165.	0.	0.
80 A	0.	0.	0.	90.	0.	90.	98.	158.	0.	0.
L	0.	0.	0.	0.	0.	180.	0.	150.	0.	0.
R	0.	0.	0.	225.	0.	0.	165.	195.	0.	0.
90 A	0.	0.	0.	113.	0.	90.	83.	195.	0.	0.
L	0.	0.	0.	0.	0.	180.	0.	195.	0.	0.
R	0.	0.	0.	180.	0.	0.	240.	165.	0.	0.
100 A	0.	0.	0.	90.	0.	90.	120.	180.	0.	0.
L	0.	0.	0.	0.	0.	180.	0.	195.	0.	0.
R	0.	0.	0.	224.	0.	0.	180.	180.	0.	0.
110 A	0.	0.	0.	112.	0.	90.	90.	203.	0.	0.
L	0.	0.	0.	0.	0.	180.	0.	225.	0.	0.
R	0.	0.	0.	135.	0.	0.	195.	180.	0.	0.
120 A	0.	0.	0.	68.	0.	105.	98.	180.	0.	0.
L	0.	0.	0.	0.	0.	210.	0.	180.	0.	0.

RADIANCE VALUES ARE IN MICROWATTS. VA AND SA ARE IN DEGREES.

FIGURE 150 CONT.

IR NUMBER OF OBSERVATIONS AS A FUNCTION OF SUN AZIMUTH

FILTER 7 AT 1210 AST INSOL ANGLE 41.9 DEG
SPECTRAL BAND 2.54 TO 2.89 MICRONS ELEVATION 30.5 KM

VA SA	0	10	20	30	40	50	60	70	80	90
R	0.	0.	0.	90.	0.	0.	0.	75.	0.	0.
130 A	0.	0.	0.	45.	0.	60.	0.	135.	0.	0.
L	0.	0.	0.	0.	0.	120.	0.	195.	0.	0.
R	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
140 A	0.	0.	0.	0.	0.	98.	0.	113.	0.	0.
L	0.	0.	0.	0.	0.	195.	0.	225.	0.	0.
R	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
150 A	0.	0.	0.	0.	0.	105.	0.	113.	0.	0.
L	0.	0.	0.	0.	0.	209.	0.	225.	0.	0.
R	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
160 A	0.	0.	0.	0.	0.	113.	0.	98.	0.	0.
L	0.	0.	0.	0.	0.	225.	0.	195.	0.	0.
R	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
170 A	0.	0.	0.	0.	0.	15.	0.	0.	0.	0.
L	0.	0.	0.	0.	0.	30.	0.	0.	0.	0.
R	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
180 A	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
L	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.

RADIANCE VALUES ARE IN MICROWATTS. VA AND SA ARE IN DEGREES.

FIGURE 150 CONT.

IR MEAN RADIANCE AS A FUNCTION OF SUN AZIMUTH

FILTER 7 AT 1210 AST INSOL ANGLE 41.9 DEG
SPECTRAL BAND 2.54 TO 2.89 MICRONS ELEVATION 30.5 KM

VA	0	10	20	30	40	50	60	70	80	90
SA										
R	0.	0.	0.	0.18	0.	0.	0.16	0.17	0.	0.
0 A	0.	0.	0.	0.18	0.	0.	0.16	0.17	0.	0.
L	0.	0.	0.	0.18	0.	0.	0.17	0.18	0.	0.
R	0.	0.	0.	0.17	0.	0.	0.17	0.16	0.	0.
10 A	0.	0.	0.	0.17	0.	0.	0.17	0.16	0.	0.
L	0.	0.	0.	0.17	0.	0.	0.17	0.16	0.	0.
R	0.	0.	0.	0.17	0.	0.	0.17	0.16	0.	0.
20 A	0.	0.	0.	0.17	0.	0.	0.17	0.16	0.	0.
L	0.	0.	0.	0.	0.	0.	0.18	0.16	0.	0.
R	0.	0.	0.	0.17	0.	0.	0.17	0.15	0.	0.
30 A	0.	0.	0.	0.17	0.	0.15	0.17	0.16	0.	0.
L	0.	0.	0.	0.	0.	0.15	0.	0.16	0.	0.
R	0.	0.	0.	0.17	0.	0.	0.22	0.19	0.	0.
40 A	0.	0.	0.	0.17	0.	0.17	0.22	0.17	0.	0.
L	0.	0.	0.	0.	0.	0.17	0.	0.16	0.	0.
R	0.	0.	0.	0.17	0.	0.	0.19	0.18	0.	0.
50 A	0.	0.	0.	0.17	0.	0.17	0.19	0.17	0.	0.
L	0.	0.	0.	0.	0.	0.17	0.	0.17	0.	0.
R	0.	0.	0.	0.15	0.	0.	0.20	0.19	0.	0.
60 A	0.	0.	0.	0.15	0.	0.18	0.20	0.19	0.	0.
L	0.	0.	0.	0.	0.	0.18	0.	0.20	0.	0.

RADIANCE VALUES ARE IN MICROWATTS. VA AND SA ARE IN DEGREES.

FIGURE 151

IR MEAN RADIANCE AS A FUNCTION OF SUN AZIMUTH

FILTER 7 AT 1210 AST						INSOL ANGLE 41.9 DEG				
SPECTRAL BAND 2.54 TO 2.89 MICRONS						ELEVATION 30.5 KM				
VA	0	10	20	30	40	50	60	70	80	90
SA										
R	0.	0.	0.	0.18	0.	0.	0.19	0.16	0.	0.
70 A	0.	0.	0.	0.18	0.	0.17	0.19	0.17	0.	0.
L	0.	0.	0.	0.	0.	0.17	0.	0.19	0.	0.
R	0.	0.	0.	0.16	0.	0.	0.17	0.18	0.	0.
80 A	0.	0.	0.	0.16	0.	0.16	0.17	0.19	0.	0.
L	0.	0.	0.	0.	0.	0.16	0.	0.20	0.	0.
R	0.	0.	0.	0.18	0.	0.	0.18	0.18	0.	0.
90 A	0.	0.	0.	0.18	0.	0.17	0.18	0.18	0.	0.
L	0.	0.	0.	0.	0.	0.17	0.	0.18	0.	0.
R	0.	0.	0.	0.16	0.	0.	0.15	0.16	0.	0.
100 A	0.	0.	0.	0.16	0.	0.17	0.15	0.18	0.	0.
L	0.	0.	0.	0.	0.	0.17	0.	0.20	0.	0.
R	0.	0.	0.	0.18	0.	0.	0.17	0.15	0.	0.
110 A	0.	0.	0.	0.18	0.	0.16	0.17	0.16	0.	0.
L	0.	0.	0.	0.	0.	0.16	0.	0.16	0.	0.
R	0.	0.	0.	0.18	0.	0.	0.16	0.15	0.	0.
120 A	0.	0.	0.	0.18	0.	0.17	0.16	0.17	0.	0.
L	0.	0.	0.	0.	0.	0.17	0.	0.19	0.	0.

RADIANCE VALUES ARE IN MICROWATTS. VA AND SA ARE IN DEGREES.

FIGURE 151 CONT.

IR MEAN RADIANCE AS A FUNCTION OF SUN AZINUTH

FILTER 7 AT 1210 AST INSOL ANGLE 41.9 DEG
SPECTRAL BAND 2.54 TO 2.89 MICRONS ELEVATION 30.5 KM

	VA	0	10	20	30	40	50	60	70	80	90
SA											
	R	0.	0.	0.	0.19	0.	0.	0.	0.16	0.	0.
130	A	0.	0.	0.	0.19	0.	0.20	0.	0.19	0.	0.
	L	0.	0.	0.	0.	0.	0.20	0.	0.20	0.	0.
	R	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
140	A	0.	0.	0.	0.	0.	0.17	0.	0.16	0.	0.
	L	0.	0.	0.	0.	0.	0.17	0.	0.16	0.	0.
	R	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
150	A	0.	0.	0.	0.	0.	0.17	0.	0.19	0.	0.
	L	0.	0.	0.	0.	0.	0.17	0.	0.19	0.	0.
	R	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
160	A	0.	0.	0.	0.	0.	0.18	0.	0.18	0.	0.
	L	0.	0.	0.	0.	0.	0.18	0.	0.18	0.	0.
	R	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
170	A	0.	0.	0.	0.	0.	0.17	0.	0.	0.	0.
	L	0.	0.	0.	0.	0.	0.17	0.	0.	0.	0.
	R	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
180	A	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
	L	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.

RADIANCE VALUES ARE IN MICROWATTS. VA AND SA ARE IN DEGREES.

FIGURE 151 CONT.

IR RMS FLUCTUATION AS A FUNCTION OF SUN AZIMUTH

FILTER 7 AT 1210 AST INSOL ANGLE 41.9 DEG
SPECTRAL BAND 2.54 TO 2.89 MICRONS ELEVATION 30.5 KM

VA	0	10	20	30	40	50	60	70	80	90
SA										
R	0.	0.	0.	0.13	0.	0.	0.14	0.13	0.	0.
0 A	0.	0.	0.	0.19	0.	0.	0.19	0.18	0.	0.
L	0.	0.	0.	0.13	0.	0.	0.14	0.12	0.	0.
R	0.	0.	0.	0.13	0.	0.	0.12	0.12	0.	0.
10 A	0.	0.	0.	0.18	0.	0.	0.19	0.18	0.	0.
L	0.	0.	0.	0.12	0.	0.	0.14	0.13	0.	0.
R	0.	0.	0.	0.12	0.	0.	0.11	0.12	0.	0.
20 A	0.	0.	0.	0.12	0.	0.	0.18	0.17	0.	0.
L	0.	0.	0.	0.	0.	0.	0.14	0.12	0.	0.
R	0.	0.	0.	0.13	0.	0.	0.12	0.11	0.	0.
30 A	0.	0.	0.	0.13	0.	0.12	0.12	0.17	0.	0.
L	0.	0.	0.	0.	0.	0.12	0.	0.13	0.	0.
R	0.	0.	0.	0.13	0.	0.	0.15	0.13	0.	0.
40 A	0.	0.	0.	0.13	0.	0.12	0.15	0.18	0.	0.
L	0.	0.	0.	0.	0.	0.12	0.	0.13	0.	0.
R	0.	0.	0.	0.12	0.	0.	0.14	0.12	0.	0.
50 A	0.	0.	0.	0.12	0.	0.14	0.14	0.18	0.	0.
L	0.	0.	0.	0.	0.	0.14	0.	0.14	0.	0.
R	0.	0.	0.	0.12	0.	0.	0.15	0.15	0.	0.
60 A	0.	0.	0.	0.12	0.	0.13	0.15	0.20	0.	0.
L	0.	0.	0.	0.	0.	0.13	0.	0.14	0.	0.

RADIANCE VALUES ARE IN MICROWATTS. VA AND SA ARE IN DEGREES.

IR RMS FLUCTUATION AS A FUNCTION OF SUN AZIMUTH

FILTER 7 AT 1210 AST INSOL ANGLE 41.9 DEG
SPECTRAL BAND 2.54 TO 2.89 MICRONS ELEVATION 30.5 KM

VA	0	10	20	30	40	50	60	70	80	90
SA										
R	0.	0.	0.	0.13	0.	0.	0.14	0.12	0.	0.
70 A	0.	0.	0.	0.13	0.	0.13	0.14	0.18	0.	0.
L	0.	0.	0.	0.	0.	0.13	0.	0.14	0.	0.
R	0.	0.	0.	0.12	0.	0.	0.13	0.13	0.	0.
80 A	0.	0.	0.	0.12	0.	0.12	0.13	0.20	0.	0.
L	0.	0.	0.	0.	0.	0.12	0.	0.15	0.	0.
R	0.	0.	0.	0.13	0.	0.	0.12	0.13	0.	0.
90 A	0.	0.	0.	0.13	0.	0.13	0.12	0.19	0.	0.
L	0.	0.	0.	0.	0.	0.13	0.	0.14	0.	0.
R	0.	0.	0.	0.13	0.	0.	0.12	0.12	0.	0.
100 A	0.	0.	0.	0.13	0.	0.13	0.12	0.19	0.	0.
L	0.	0.	0.	0.	0.	0.13	0.	0.14	0.	0.
R	0.	0.	0.	0.14	0.	0.	0.13	0.12	0.	0.
110 A	0.	0.	0.	0.14	0.	0.13	0.13	0.17	0.	0.
L	0.	0.	0.	0.	0.	0.13	0.	0.13	0.	0.
R	0.	0.	0.	0.14	0.	0.	0.12	0.13	0.	0.
120 A	0.	0.	0.	0.14	0.	0.13	0.12	0.18	0.	0.
L	0.	0.	0.	0.	0.	0.13	0.	0.13	0.	0.

RADIANCE VALUES ARE IN MICROWATTS. VA AND SA ARE IN DEGREES.

FIGURE 152 CONT.

IR RMS FLUCTUATION AS A FUNCTION OF SUN AZIMUTH

FILTER 7 AT 1210 AST INSOL ANGLE 41.9 DEG
SPECTRAL BAND 2.54 TO 2.89 MICRONS ELEVATION 30.5 KM

	VA	0	10	20	30	40	50	60	70	80	90
SA											
	R	0.	0.	0.	0.13	0.	0.	0.	0.11	0.	0.
130	A	0.	0.	0.	0.13	0.	0.14	0.	0.18	0.	0.
	L	0.	0.	0.	0.	0.	0.14	0.	0.14	0.	0.
	R	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
140	A	0.	0.	0.	0.	0.	0.13	0.	0.12	0.	0.
	L	0.	0.	0.	0.	0.	0.13	0.	0.12	0.	0.
	R	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
150	A	0.	0.	0.	0.	0.	0.13	0.	0.13	0.	0.
	L	0.	0.	0.	0.	0.	0.13	0.	0.13	0.	0.
	R	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
160	A	0.	0.	0.	0.	0.	0.14	0.	0.14	0.	0.
	L	0.	0.	0.	0.	0.	0.14	0.	0.14	0.	0.
	R	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
170	A	0.	0.	0.	0.	0.	0.11	0.	0.	0.	0.
	L	0.	0.	0.	0.	0.	0.11	0.	0.	0.	0.
	R	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
180	A	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
	L	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.

RADIANCE VALUES ARE IN MICROWATTS. VA AND SA ARE IN DEGREES.

FIGURE 152 CONT.

IR NUMBER OF OBSERVATIONS AS A FUNCTION OF SCATTERING ANGLE

FILTER 7 AT 1210 AST INSOL ANGLE 41.9 DEG
SPECTRAL BAND 2.54 TO 2.89 MICRONS ELEVATION 30.5 KM

SA	VA	0	10	20	30	40	50	60	70	80	90
0		0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
10		0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
20		0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
30		0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
40		0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
50		0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
60		0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
70		0.	0.	0.	0.	0.	0.	0.	1242.	0.	0.
80		0.	0.	0.	0.	0.	0.	810.	735.	0.	0.
90		0.	0.	0.	0.	0.	75.	495.	585.	0.	0.
100		0.	0.	0.	0.	0.	537.	255.	540.	0.	0.
110		0.	0.	0.	1138.	0.	330.	315.	570.	0.	0.
120		0.	0.	0.	630.	0.	330.	330.	570.	0.	0.
130		0.	0.	0.	525.	0.	315.	300.	435.	0.	0.
140		0.	0.	0.	404.	0.	285.	30.	405.	0.	0.
150		0.	0.	0.	150.	0.	240.	0.	165.	0.	0.
160		0.	0.	0.	0.	0.	299.	0.	0.	0.	0.
170		0.	0.	0.	0.	0.	165.	0.	0.	0.	0.
180		0.	0.	0.	0.	0.	0.	0.	0.	0.	0.

RADIANCE VALUES ARE IN MICROWATTS. VA AND SA ARE IN DEGREES.

FIGURE 153

IR MEAN RADIANCE AS A FUNCTION OF SCATTERING ANGLE

FILTER 7 AT 1210 AST INSOL ANGLE 41.9 DEG
SPECTRAL BAND 2.54 TO 2.89 MICRONS ELEVATION 30.5 KM

VA SA	0	10	20	30	40	50	60	70	80	90
0	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
10	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
20	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
30	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
40	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
50	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
60	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
70	0.	0.	0.	0.	0.	0.	0.	0.16	0.	0.
80	0.	0.	0.	0.	0.	0.	0.17	0.18	0.	0.
90	0.	0.	0.	0.	0.	0.16	0.19	0.18	0.	0.
100	0.	0.	0.	0.	0.	0.17	0.19	0.18	0.	0.
110	0.	0.	0.	0.17	0.	0.17	0.17	0.17	0.	0.
120	0.	0.	0.	0.17	0.	0.17	0.16	0.17	0.	0.
130	0.	0.	0.	0.17	0.	0.16	0.16	0.18	0.	0.
140	0.	0.	0.	0.18	0.	0.18	0.15	0.18	0.	0.
150	0.	0.	0.	0.17	0.	0.18	0.	0.17	0.	0.
160	0.	0.	0.	0.	0.	0.17	0.	0.	0.	0.
170	0.	0.	0.	0.	0.	0.17	0.	0.	0.	0.
180	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.

RADIANCE VALUES ARE IN MICROWATTS. VA AND SA ARE IN DEGREES.

FIGURE 154

IR RMS FLUCTUATION AS A FUNCTION OF SCATTERING ANGLE

FILTER 7 AT 1210 ÅST INSOL ANGLE 41.9 DEG
SPECTRAL BAND 2.54 TO 2.89 MICRONS ELEVATION 30.5 KM

VA SA	0	10	20	30	40	50	60	70	80	90
0	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
10	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
20	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
30	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
40	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
50	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
60	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
70	0.	0.	0.	0.	0.	0.	0.	0.12	0.	0.
80	0.	0.	0.	0.	0.	0.	0.13	0.13	0.	0.
90	0.	0.	0.	0.	0.	0.12	0.14	0.14	0.	0.
100	0.	0.	0.	0.	0.	0.13	0.15	0.14	0.	0.
110	0.	0.	0.	0.13	0.	0.13	0.13	0.13	0.	0.
120	0.	0.	0.	0.12	0.	0.12	0.13	0.13	0.	0.
130	0.	0.	0.	0.13	0.	0.13	0.12	0.13	0.	0.
140	0.	0.	0.	0.14	0.	0.13	0.11	0.13	0.	0.
150	0.	0.	0.	0.13	0.	0.13	0.	0.13	0.	0.
160	0.	0.	0.	0.	0.	0.14	0.	0.	0.	0.
170	0.	0.	0.	0.	0.	0.13	0.	0.	0.	0.
180	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.

RADIANCE VALUES ARE IN MICROWATTS. VA AND SA ARE IN DEGREES.

FIGURE 155

IR NUMBER OF OBSERVATIONS AS A FUNCTION OF SUN AZIMUTH

FILTER 6 AT 1215 AST INSOL ANGLE 41.9 DEG
SPECTRAL BAND 2.50 TO 2.78 MICRONS ELEVATION 30.5 KM

VA SA	0	10	20	30	40	50	60	70	80	90
R	0.	0.	0.	90.	0.	0.	0.	90.	0.	0.
0 A	0.	0.	0.	98.	0.	0.	0.	90.	0.	0.
L	0.	0.	0.	105.	0.	0.	0.	90.	0.	0.
R	0.	0.	0.	224.	0.	0.	0.	195.	0.	0.
10 A	0.	0.	0.	210.	0.	0.	0.	195.	0.	0.
L	0.	0.	0.	195.	0.	0.	0.	195.	0.	0.
R	0.	0.	0.	178.	0.	0.	0.	180.	0.	0.
20 A	0.	0.	0.	134.	0.	0.	0.	150.	0.	0.
L	0.	0.	0.	90.	0.	0.	0.	120.	0.	0.
R	0.	0.	0.	225.	0.	0.	0.	180.	0.	0.
30 A	0.	0.	0.	113.	0.	53.	0.	143.	0.	0.
L	0.	0.	0.	0.	0.	105.	0.	105.	0.	0.
R	0.	0.	0.	210.	0.	0.	0.	165.	0.	0.
40 A	0.	0.	0.	105.	0.	90.	0.	188.	0.	0.
L	0.	0.	0.	0.	0.	180.	0.	210.	0.	0.
R	0.	0.	0.	225.	0.	0.	0.	180.	0.	0.
50 A	0.	0.	0.	113.	0.	112.	0.	188.	0.	0.
L	0.	0.	0.	0.	0.	224.	0.	195.	0.	0.
R	0.	0.	0.	120.	0.	0.	0.	195.	0.	0.
60 A	0.	0.	0.	60.	0.	97.	0.	188.	0.	0.
L	0.	0.	0.	0.	0.	194.	0.	180.	0.	0.

RADIANCE VALUES ARE IN MICROWATTS. VA AND SA ARE IN DEGREES.

FIGURE 156

IR NUMBER OF OBSERVATIONS AS A FUNCTION OF SUN AZIMUTH

FILTER 6 AT 1215 AST INSOL ANGLE 41.9 DEG
SPECTRAL BAND 2.50 TO 2.78 MICRONS ELEVATION 30.5 KM

VA SA	0	10	20	30	40	50	60	70	80	90
R	0.	0.	0.	210.	0.	0.	0.	179.	0.	0.
70 A	0.	0.	0.	105.	0.	105.	0.	180.	0.	0.
L	0.	0.	0.	0.	0.	210.	0.	180.	0.	0.
R	0.	0.	0.	210.	0.	0.	0.	150.	0.	0.
80 A	0.	0.	0.	105.	0.	90.	0.	173.	0.	0.
L	0.	0.	0.	0.	0.	179.	0.	195.	0.	0.
R	0.	0.	0.	195.	0.	0.	0.	180.	0.	0.
90 A	0.	0.	0.	98.	0.	90.	0.	180.	0.	0.
L	0.	0.	0.	0.	0.	179.	0.	180.	0.	0.
R	0.	0.	0.	180.	0.	0.	0.	210.	0.	0.
100 A	0.	0.	0.	90.	0.	75.	0.	188.	0.	0.
L	0.	0.	0.	0.	0.	150.	0.	165.	0.	0.
R	0.	0.	0.	195.	0.	0.	0.	180.	0.	0.
110 A	0.	0.	0.	98.	0.	96.	0.	188.	0.	0.
L	0.	0.	0.	0.	0.	192.	0.	195.	0.	0.
R	0.	0.	0.	195.	0.	0.	0.	150.	0.	0.
120 A	0.	0.	0.	98.	0.	75.	0.	173.	0.	0.
L	0.	0.	0.	0.	0.	150.	0.	195.	0.	0.

RADIANCE VALUES ARE IN MICROWATTS. VA AND SA ARE IN DEGREES.

FIGURE 156 CONT.

IR NUMBER OF OBSERVATIONS AS A FUNCTION OF SUN AZIMUTH

FILTER 6 AT 1215 AST INSOL ANGLE 41.9 DEG
SPECTRAL BAND 2.50 TO 2.78 MICRONS ELEVATION 30.5 KM

	VA	0	10	20	30	40	50	60	70	80	90
SA											
	R	0.	0.	0.	15.	0.	0.	0.	0.	0.	0.
130	A	0.	0.	0.	8.	0.	90.	0.	90.	0.	0.
	L	0.	0.	0.	0.	0.	180.	0.	180.	0.	0.
	R	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
140	A	0.	0.	0.	0.	0.	90.	0.	98.	0.	0.
	L	0.	0.	0.	0.	0.	180.	0.	195.	0.	0.
	R	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
150	A	0.	0.	0.	0.	0.	83.	0.	98.	0.	0.
	L	0.	0.	0.	0.	0.	165.	0.	195.	0.	0.
	R	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
160	A	0.	0.	0.	0.	0.	83.	0.	98.	0.	0.
	L	0.	0.	0.	0.	0.	165.	0.	195.	0.	0.
	R	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
170	A	0.	0.	0.	0.	0.	15.	0.	45.	0.	0.
	L	0.	0.	0.	0.	0.	30.	0.	90.	0.	0.
	R	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
180	A	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
	L	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.

RADIANCE VALUES ARE IN MICROWATTS. VA AND SA ARE IN DEGREES.

FIGURE 156 CONT.

IR MEAN RADIANCE AS A FUNCTION OF SUN AZIMUTH

FILTER 6 AT 1215 AST INSOL ANGLE 41.9 DEG
SPECTRAL BAND 2.50 TO 2.78 MICRONS ELEVATION 30.5 KM

VA	0	10	20	30	40	50	60	70	80	90
SA										
R	0.	0.	0.	0.16	0.	0.	0.	0.34	0.	0.
0 A	0.	0.	0.	0.18	0.	0.	0.	0.33	0.	0.
L	0.	0.	0.	0.19	0.	0.	0.	0.32	0.	0.
R	0.	0.	0.	0.17	0.	0.	0.	0.38	0.	0.
10 A	0.	0.	0.	0.17	0.	0.	0.	0.30	0.	0.
L	0.	0.	0.	0.17	0.	0.	0.	0.21	0.	0.
R	0.	0.	0.	0.16	0.	0.	0.	0.73	0.	0.
20 A	0.	0.	0.	0.17	0.	0.	0.	0.52	0.	0.
L	0.	0.	0.	0.20	0.	0.	0.	0.21	0.	0.
R	0.	0.	0.	0.17	0.	0.	0.	0.69	0.	0.
30 A	0.	0.	0.	0.17	0.	0.16	0.	0.50	0.	0.
L	0.	0.	0.	0.	0.	0.16	0.	0.18	0.	0.
R	0.	0.	0.	0.17	0.	0.	0.	0.52	0.	0.
40 A	0.	0.	0.	0.17	0.	0.15	0.	0.33	0.	0.
L	0.	0.	0.	0.	0.	0.15	0.	0.18	0.	0.
R	0.	0.	0.	0.16	0.	0.	0.	0.43	0.	0.
50 A	0.	0.	0.	0.16	0.	0.17	0.	0.31	0.	0.
L	0.	0.	0.	0.	0.	0.17	0.	0.19	0.	0.
R	0.	0.	0.	0.17	0.	0.	0.	0.47	0.	0.
60 A	0.	0.	0.	0.17	0.	0.15	0.	0.61	0.	0.
L	0.	0.	0.	0.	0.	0.15	0.	0.77	0.	0.

RADIANCE VALUES ARE IN MICROWATTS. VA AND SA ARE IN DEGREES.

IR MEAN RADIANCE AS A FUNCTION OF SUN AZIMUTH

FILTER 6 AT 1215 AST INSOL ANGLE 41.9 DEG
SPECTRAL BAND 2.50 TO 2.78 MICRONS ELEVATION 30.5 KM

VA	0	10	20	30	40	50	60	70	80	90
SA										
R	0.	0.	0.	0.16	0.	0.	0.	0.46	0.	0.
70 A	0.	0.	0.	0.16	0.	0.16	0.	0.55	0.	0.
L	0.	0.	0.	0.	0.	0.16	0.	0.65	0.	0.
R	0.	0.	0.	0.19	0.	0.	0.	0.38	0.	0.
80 A	0.	0.	0.	0.19	0.	0.17	0.	0.60	0.	0.
L	0.	0.	0.	0.	0.	0.17	0.	0.76	0.	0.
R	0.	0.	0.	0.19	0.	0.	0.	0.37	0.	0.
90 A	0.	0.	0.	0.19	0.	0.17	0.	0.50	0.	0.
L	0.	0.	0.	0.	0.	0.17	0.	0.63	0.	0.
R	0.	0.	0.	0.17	0.	0.	0.	0.30	0.	0.
100 A	0.	0.	0.	0.17	0.	0.15	0.	0.55	0.	0.
L	0.	0.	0.	0.	0.	0.15	0.	0.86	0.	0.
R	0.	0.	0.	0.16	0.	0.	0.	0.25	0.	0.
110 A	0.	0.	0.	0.16	0.	0.17	0.	0.50	0.	0.
L	0.	0.	0.	0.	0.	0.17	0.	0.73	0.	0.
R	0.	0.	0.	0.17	0.	0.	0.	0.34	0.	0.
120 A	0.	0.	0.	0.17	0.	0.17	0.	0.45	0.	0.
L	0.	0.	0.	0.	0.	0.17	0.	0.54	0.	0.

RADIANCE VALUES ARE IN MICROWATTS. VA AND SA ARE IN DEGREES.

FIGURE 157 CONT.

IR MEAN RADIANCE AS A FUNCTION OF SUN AZIMUTH

FILTER 6 AT 1215 AST INSOL ANGLE 41.9 DEG
SPECTRAL BAND 2.50 TO 2.78 MICRONS ELEVATION 30.5 KM

	VA	0	10	20	30	40	50	60	70	80	90
SA											
	R	0.	0.	0.	0.18	0.	0.	0.	0.	0.	0.
130	A	0.	0.	0.	0.18	0.	0.17	0.	0.52	0.	0.
	L	0.	0.	0.	0.	0.	0.17	0.	0.52	0.	0.
	R	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
140	A	0.	0.	0.	0.	0.	0.16	0.	0.55	0.	0.
	L	0.	0.	0.	0.	0.	0.16	0.	0.55	0.	0.
	R	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
150	A	0.	0.	0.	0.	0.	0.15	0.	0.41	0.	0.
	L	0.	0.	0.	0.	0.	0.15	0.	0.41	0.	0.
	R	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
160	A	0.	0.	0.	0.	0.	0.17	0.	0.55	0.	0.
	L	0.	0.	0.	0.	0.	0.17	0.	0.55	0.	0.
	R	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
170	A	0.	0.	0.	0.	0.	0.13	0.	0.45	0.	0.
	L	0.	0.	0.	0.	0.	0.13	0.	0.45	0.	0.
	R	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
180	A	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
	L	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.

RADIANCE VALUES ARE IN MICROWATTS. VA AND SA ARE IN DEGREES.

FIGURE 157 CONT.

IR RMS FLUCTUATION AS A FUNCTION OF SUN AZIMUTH

FILTER 6 AT 1215 AST INSOL ANGLE 41.9 DEG
SPECTRAL BAND 2.50 TO 2.78 MICRONS ELEVATION 30.5 KM

VA	0	10	20	30	40	50	60	70	80	90
SA										
R	0.	0.	0.	0.12	0.	0.	0.	0.21	0.	0.
0 A	0.	0.	0.	0.18	0.	0.	0.	0.28	0.	0.
L	0.	0.	0.	0.13	0.	0.	0.	0.19	0.	0.
R	0.	0.	0.	0.13	0.	0.	0.	0.20	0.	0.
10 A	0.	0.	0.	0.19	0.	0.	0.	0.25	0.	0.
L	0.	0.	0.	0.13	0.	0.	0.	0.16	0.	0.
R	0.	0.	0.	0.12	0.	0.	0.	0.27	0.	0.
20 A	0.	0.	0.	0.19	0.	0.	0.	0.30	0.	0.
L	0.	0.	0.	0.15	0.	0.	0.	0.14	0.	0.
R	0.	0.	0.	0.13	0.	0.	0.	0.29	0.	0.
30 A	0.	0.	0.	0.13	0.	0.12	0.	0.33	0.	0.
L	0.	0.	0.	0.	0.	0.12	0.	0.15	0.	0.
R	0.	0.	0.	0.12	0.	0.	0.	0.24	0.	0.
40 A	0.	0.	0.	0.12	0.	0.12	0.	0.28	0.	0.
L	0.	0.	0.	0.	0.	0.12	0.	0.15	0.	0.
R	0.	0.	0.	0.12	0.	0.	0.	0.20	0.	0.
50 A	0.	0.	0.	0.12	0.	0.13	0.	0.25	0.	0.
L	0.	0.	0.	0.	0.	0.13	0.	0.15	0.	0.
R	0.	0.	0.	0.13	0.	0.	0.	0.22	0.	0.
60 A	0.	0.	0.	0.13	0.	0.11	0.	0.44	0.	0.
L	0.	0.	0.	0.	0.	0.11	0.	0.38	0.	0.

RADIANCE VALUES ARE IN MICROWATTS. VA AND SA ARE IN DEGREES.

IR RMS FLUCTUATION AS A FUNCTION OF SUN AZIMUTH

FILTER 6 AT 1215 AST INSOL ANGLE 41.9 DEG
SPECTRAL BAND 2.50 TO 2.78 MICRONS ELEVATION 30.5 KM

VA	0	10	20	30	40	50	60	70	80	90
SA										
R	0.	0.	0.	0.12	0.	0.	0.	0.22	0.	0.
70 A	0.	0.	0.	0.12	0.	0.11	0.	0.34	0.	0.
L	0.	0.	0.	0.	0.	0.11	0.	0.26	0.	0.
R	0.	0.	0.	0.15	0.	0.	0.	0.22	0.	0.
80 A	0.	0.	0.	0.15	0.	0.12	0.	0.33	0.	0.
L	0.	0.	0.	0.	0.	0.12	0.	0.24	0.	0.
R	0.	0.	0.	0.14	0.	0.	0.	0.21	0.	0.
90 A	0.	0.	0.	0.14	0.	0.13	0.	0.32	0.	0.
L	0.	0.	0.	0.	0.	0.13	0.	0.24	0.	0.
R	0.	0.	0.	0.13	0.	0.	0.	0.17	0.	0.
100 A	0.	0.	0.	0.13	0.	0.12	0.	0.28	0.	0.
L	0.	0.	0.	0.	0.	0.12	0.	0.22	0.	0.
R	0.	0.	0.	0.13	0.	0.	0.	0.17	0.	0.
110 A	0.	0.	0.	0.13	0.	0.13	0.	0.30	0.	0.
L	0.	0.	0.	0.	0.	0.13	0.	0.25	0.	0.
R	0.	0.	0.	0.12	0.	0.	0.	0.21	0.	0.
120 A	0.	0.	0.	0.12	0.	0.14	0.	0.36	0.	0.
L	0.	0.	0.	0.	0.	0.14	0.	0.29	0.	0.

RADIANCE VALUES ARE IN MICROWATTS. VA AND SA ARE IN DEGREES.

FIGURE 158 CONT.

IR RMS FLUCTUATION AS A FUNCTION OF SUN AZIMUTH

FILTER 6 AT 1215 AST INSOL ANGLE 41.9 DEG
SPECTRAL BAND 2.50 TO 2.78 MICRONS ELEVATION 30.5 KM

VA	0	10	20	30	40	50	60	70	80	90
SA										
R	0.	0.	0.	0.08	0.	0.	0.	0.	0.	0.
130 A	0.	0.	0.	0.08	0.	0.12	0.	0.22	0.	0.
L	0.	0.	0.	0.	0.	0.12	0.	0.22	0.	0.
R	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
140 A	0.	0.	0.	0.	0.	0.11	0.	0.23	0.	0.
L	0.	0.	0.	0.	0.	0.11	0.	0.23	0.	0.
R	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
150 A	0.	0.	0.	0.	0.	0.12	0.	0.22	0.	0.
L	0.	0.	0.	0.	0.	0.12	0.	0.22	0.	0.
R	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
160 A	0.	0.	0.	0.	0.	0.13	0.	0.23	0.	0.
L	0.	0.	0.	0.	0.	0.13	0.	0.23	0.	0.
R	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
170 A	0.	0.	0.	0.	0.	0.13	0.	0.21	0.	0.
L	0.	0.	0.	0.	0.	0.13	0.	0.21	0.	0.
R	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
180 A	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
L	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.

RADIANCE VALUES ARE IN MICROWATTS. VA AND SA ARE IN DEGREES.

FIGURE 158 CONT.

IR NUMBER OF OBSERVATIONS AS A FUNCTION OF SCATTERING ANGLE

FILTER 6 AT 1215 AST INSOL ANGLE 41.9 DEG
SPECTRAL BAND 2.50 TO 2.78 MICRONS ELEVATION 30.5 KM

SA	VA	0	10	20	30	40	50	60	70	80	90
0		0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
10		0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
20		0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
30		0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
40		0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
50		0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
60		0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
70		0.	0.	0.	0.	0.	0.	0.	1335.	0.	0.
80		0.	0.	0.	0.	0.	0.	0.	750.	0.	0.
90		0.	0.	0.	0.	0.	30.	0.	614.	0.	0.
100		0.	0.	0.	0.	0.	553.	0.	570.	0.	0.
110		0.	0.	0.	1257.	0.	420.	0.	555.	0.	0.
120		0.	0.	0.	615.	0.	313.	0.	540.	0.	0.
130		0.	0.	0.	495.	0.	283.	0.	300.	0.	0.
140		0.	0.	0.	390.	0.	254.	0.	345.	0.	0.
150		0.	0.	0.	105.	0.	270.	0.	285.	0.	0.
160		0.	0.	0.	0.	0.	210.	0.	0.	0.	0.
170		0.	0.	0.	0.	0.	150.	0.	0.	0.	0.
180		0.	0.	0.	0.	0.	0.	0.	0.	0.	0.

RADIANCE VALUES ARE IN MICROWATTS. VA AND SA ARE IN DEGREES.

FIGURE 159

IR MEAN RADIANCE AS A FUNCTION OF SCATTERING ANGLE

FILTER 6 AT 1215 AST INSOL ANGLE 41.9 DEG
SPECTRAL BAND 2.50 TO 2.78 MICRONS ELEVATION 30.5 KM

SA	VA	0	10	20	30	40	50	60	70	80	90
0	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
10	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
20	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
30	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
40	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
50	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
60	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
70	0.	0.	0.	0.	0.	0.	0.	0.	0.41	0.	0.
80	0.	0.	0.	0.	0.	0.	0.	0.	0.37	0.	0.
90	0.	0.	0.	0.	0.	0.	0.12	0.	0.58	0.	0.
100	0.	0.	0.	0.	0.	0.	0.16	0.	0.54	0.	0.
110	0.	0.	0.	0.17	0.	0.16	0.	0.	0.53	0.	0.
120	0.	0.	0.	0.16	0.	0.17	0.	0.	0.51	0.	0.
130	0.	0.	0.	0.19	0.	0.17	0.	0.	0.49	0.	0.
140	0.	0.	0.	0.16	0.	0.17	0.	0.	0.47	0.	0.
150	0.	0.	0.	0.18	0.	0.16	0.	0.	0.52	0.	0.
160	0.	0.	0.	0.	0.	0.15	0.	0.	0.	0.	0.
170	0.	0.	0.	0.	0.	0.17	0.	0.	0.	0.	0.
180	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.

RADIANCE VALUES ARE IN MICROWATTS. VA AND SA ARE IN DEGREES.

FIGURE 160

IR RMS FLUCTUATION AS A FUNCTION OF SCATTERING ANGLE

FILTER 6 AT 1215 AST INSOL ANGLE 41.9 DEG
SPECTRAL BAND 2.50 TO 2.78 MICRONS ELEVATION 30.5 KM

VA	0	10	20	30	40	50	60	70	80	90
SA										
0	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
10	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
20	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
30	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
40	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
50	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
60	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
70	0.	0.	0.	0.	0.	0.	0.	0.30	0.	0.
80	0.	0.	0.	0.	0.	0.	0.	0.28	0.	0.
90	0.	0.	0.	0.	0.	0.10	0.	0.29	0.	0.
100	0.	0.	0.	0.	0.	0.12	0.	0.29	0.	0.
110	0.	0.	0.	0.13	0.	0.12	0.	0.33	0.	0.
120	0.	0.	0.	0.12	0.	0.13	0.	0.32	0.	0.
130	0.	0.	0.	0.14	0.	0.13	0.	0.23	0.	0.
140	0.	0.	0.	0.13	0.	0.13	0.	0.23	0.	0.
150	0.	0.	0.	0.12	0.	0.12	0.	0.23	0.	0.
160	0.	0.	0.	0.	0.	0.12	0.	0.	0.	0.
170	0.	0.	0.	0.	0.	0.14	0.	0.	0.	0.
180	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.

RADIANCE VALUES ARE IN MICROWATTS. VA AND SA ARE IN DEGREES.

FIGURE 161

IR NUMBER OF OBSERVATIONS AS A FUNCTION OF SUN AZIMUTH

FILTER 5 AT 1220 AST INSOL ANGLE 42.0 DEG
SPECTRAL BAND 1.57 TO 2.98 MICRONS ELEVATION 30.5 KM

VA SA	0	10	20	30	40	50	60	70	80	90
R	0.	0.	0.	0.	75.	15.	0.	105.	0.	0.
0 A	0.	0.	0.	0.	90.	8.	0.	98.	0.	0.
L	0.	0.	0.	0.	105.	0.	0.	90.	0.	0.
R	0.	0.	0.	0.	150.	0.	0.	180.	0.	0.
10 A	0.	0.	0.	0.	173.	0.	0.	188.	0.	0.
L	0.	0.	0.	0.	195.	0.	0.	195.	0.	0.
R	0.	0.	0.	0.	135.	0.	0.	195.	0.	0.
20 A	0.	0.	0.	0.	128.	0.	0.	203.	0.	0.
L	0.	0.	0.	0.	120.	0.	0.	210.	0.	0.
R	0.	0.	0.	0.	165.	15.	0.	150.	0.	0.
30 A	0.	0.	0.	30.	83.	8.	45.	135.	0.	0.
L	0.	0.	0.	60.	0.	0.	90.	120.	0.	0.
R	0.	0.	0.	0.	195.	15.	0.	210.	0.	0.
40 A	0.	0.	0.	105.	98.	8.	90.	203.	0.	0.
L	0.	0.	0.	210.	0.	0.	180.	195.	0.	0.
R	0.	0.	0.	0.	179.	0.	0.	180.	0.	0.
50 A	0.	0.	0.	105.	90.	0.	98.	187.	0.	0.
L	0.	0.	0.	210.	0.	0.	195.	194.	0.	0.
R	0.	0.	0.	0.	195.	30.	0.	195.	0.	0.
60 A	0.	0.	0.	90.	98.	15.	90.	201.	0.	0.
L	0.	0.	0.	180.	0.	0.	180.	206.	0.	0.

RADIANCE VALUES ARE IN MICROWATTS. VA AND SA ARE IN DEGREES.

FIGURE 162

NUMBER OF OBSERVATIONS AS A FUNCTION OF SUN AZIMUTH

FILTER 5 AT 1220 AST INSOL ANGLE 42.0 DEG
SPECTRAL BAND 1.57 TO 2.98 MICRONS ELEVATION 30.5 KM

VA SA	0	10	20	30	40	50	60	70	80	90
R	0.	0.	0.	0.	210.	0.	0.	210.	0.	0.
70 A	0.	0.	0.	68.	105.	0.	98.	202.	0.	0.
L	0.	0.	0.	135.	0.	0.	195.	193.	0.	0.
R	0.	0.	0.	0.	165.	30.	0.	165.	0.	0.
80 A	0.	0.	0.	83.	83.	15.	98.	165.	0.	0.
L	0.	0.	0.	165.	0.	0.	195.	164.	0.	0.
R	0.	0.	0.	0.	150.	15.	0.	195.	0.	0.
90 A	0.	0.	0.	97.	75.	8.	83.	188.	0.	0.
L	0.	0.	0.	194.	0.	0.	165.	180.	0.	0.
R	0.	0.	0.	0.	195.	15.	0.	150.	0.	0.
100 A	0.	0.	0.	98.	98.	8.	90.	173.	0.	0.
L	0.	0.	0.	195.	0.	0.	180.	195.	0.	0.
R	0.	0.	0.	0.	195.	15.	0.	150.	0.	0.
110 A	0.	0.	0.	83.	98.	8.	98.	173.	0.	0.
L	0.	0.	0.	165.	0.	0.	195.	195.	0.	0.
R	0.	0.	0.	0.	164.	0.	0.	90.	0.	0.
120 A	0.	0.	0.	90.	82.	0.	98.	143.	0.	0.
L	0.	0.	0.	180.	0.	0.	195.	195.	0.	0.

RADIANCE VALUES ARE IN MICROWATTS. VA AND SA ARE IN DEGREES.

FIGURE 162 CONT.

IR NUMBER OF OBSERVATIONS AS A FUNCTION OF SUN AZIMUTH

FILTER 5 AT 1220 AST INSOL ANGLE 42.0 DEG
SPECTRAL BAND 1.57 TO 2.98 MICRONS ELEVATION 30.5 KM

	VA	0	10	20	30	40	50	60	70	80	90
SA											
	R	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
130	A	0.	0.	0.	105.	0.	0.	105.	75.	0.	0.
	L	0.	0.	0.	210.	0.	0.	210.	150.	0.	0.
	R	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
140	A	0.	0.	0.	75.	0.	0.	105.	105.	0.	0.
	L	0.	0.	0.	150.	0.	0.	210.	210.	0.	0.
	R	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
150	A	0.	0.	0.	98.	0.	0.	90.	105.	0.	0.
	L	0.	0.	0.	195.	0.	0.	180.	210.	0.	0.
	R	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
160	A	0.	0.	0.	83.	0.	0.	98.	90.	0.	0.
	L	0.	0.	0.	165.	0.	0.	195.	180.	0.	0.
	R	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
170	A	0.	0.	0.	53.	0.	0.	68.	105.	0.	0.
	L	0.	0.	0.	105.	0.	0.	135.	210.	0.	0.
	R	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
180	A	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
	L	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.

RADIANCE VALUES ARE IN MICROWATTS. VA AND SA ARE IN DEGREES.

FIGURE 162 CONT.

IR MEAN RADIANCE AS A FUNCTION OF SUN AZIMUTH

FILTER 5 AT 1220 AST INSOL ANGLE 42.0 DEG
SPECTRAL BAND 1.57 TO 2.98 MICRONS ELEVATION 30.5 KM

VA	0	10	20	30	40	50	60	70	80	90
SA										
R	0.	0.	0.	0.	24.11	20.82	0.	46.17	0.	0.
0 A	0.	0.	0.	0.	33.52	20.82	0.	45.10	0.	0.
L	0.	0.	0.	0.	40.23	0.	0.	43.84	0.	0.
R	0.	0.	0.	0.	40.92	0.	0.	44.86	0.	0.
10 A	0.	0.	0.	0.	37.87	0.	0.	46.28	0.	0.
L	0.	0.	0.	0.	35.52	0.	0.	47.59	0.	0.
R	0.	0.	0.	0.	40.14	0.	0.	46.56	0.	0.
20 A	0.	0.	0.	0.	34.87	0.	0.	48.68	0.	0.
L	0.	0.	0.	0.	28.94	0.	0.	50.64	0.	0.
R	0.	0.	0.	0.	24.47	42.22	0.	42.57	0.	0.
30 A	0.	0.	0.	39.67	24.47	42.22	48.77	44.78	0.	0.
L	0.	0.	0.	39.67	0.	0.	48.77	47.55	0.	0.
R	0.	0.	0.	0.	20.42	21.19	0.	46.87	0.	0.
40 A	0.	0.	0.	39.53	20.42	21.19	48.22	47.78	0.	0.
L	0.	0.	0.	39.53	0.	0.	48.22	48.76	0.	0.
R	0.	0.	0.	0.	31.77	0.	0.	46.27	0.	0.
50 A	0.	0.	0.	40.52	31.77	0.	45.14	45.55	0.	0.
L	0.	0.	0.	40.52	0.	0.	45.14	44.89	0.	0.
R	0.	0.	0.	0.	31.00	33.03	0.	48.28	0.	0.
60 A	0.	0.	0.	39.03	31.00	33.03	39.88	45.77	0.	0.
L	0.	0.	0.	39.03	0.	0.	39.88	43.39	0.	0.

RADIANCE VALUES ARE IN MICROWATTS. VA AND SA ARE IN DEGREES.

FIGURE 163

IR MEAN RADIANCE AS A FUNCTION OF SUN AZIMUTH

FILTER 5 AT 1220 AST						INSOL ANGLE 42.0 DEG				
SPECTRAL BAND 1.57 TO 2.98 MICRONS						ELEVATION 30.5 KM				
VA	0	10	20	30	40	50	60	70	80	90
SA										
R	0.	0.	0.	0.	38.90	0.	0.	48.17	0.	0.
70 A	0.	0.	0.	26.80	38.90	0.	46.96	46.79	0.	0.
L	0.	0.	0.	26.80	0.	0.	46.96	45.29	0.	0.
R	0.	0.	0.	0.	21.71	19.41	0.	47.82	0.	0.
80 A	0.	0.	0.	42.40	21.71	19.41	32.52	45.21	0.	0.
L	0.	0.	0.	42.40	0.	0.	32.52	42.58	0.	0.
R	0.	0.	0.	0.	26.51	30.99	0.	45.97	0.	0.
90 A	0.	0.	0.	37.80	26.51	30.99	35.72	47.71	0.	0.
L	0.	0.	0.	37.80	0.	0.	35.72	49.59	0.	0.
R	0.	0.	0.	0.	22.96	27.66	0.	45.18	0.	0.
100 A	0.	0.	0.	33.86	22.96	27.66	36.49	44.75	0.	0.
L	0.	0.	0.	33.86	0.	0.	36.49	44.42	0.	0.
R	0.	0.	0.	0.	20.33	11.73	0.	44.89	0.	0.
110 A	0.	0.	0.	41.86	20.33	11.73	38.00	44.33	0.	0.
L	0.	0.	0.	41.86	0.	0.	38.00	43.90	0.	0.
R	0.	0.	0.	0.	25.20	0.	0.	44.87	0.	0.
120 A	0.	0.	0.	35.82	25.20	0.	44.19	45.42	0.	0.
L	0.	0.	0.	35.82	0.	0.	44.19	45.67	0.	0.

RADIANCE VALUES ARE IN MICROWATTS. VA AND SA ARE IN DEGREES.

FIGURE 163 CONT.

IR MEAN RADIANCE AS A FUNCTION OF SUN AZIMUTH

FILTER 5 AT 1220 AST INSOL ANGLE 42.0 DEG
SPECTRAL BAND 1.57 TO 2.98 MICRONS ELEVATION 30.5 KM

	VA	0	10	20	30	40	50	60	70	80	90
SA											
	R	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
130	A	0.	0.	0.	35.87	0.	0.	46.40	47.94	0.	0.
	L	0.	0.	0.	35.87	0.	0.	46.40	47.94	0.	0.
	R	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
140	A	0.	0.	0.	33.21	0.	0.	39.72	47.03	0.	0.
	L	0.	0.	0.	33.21	0.	0.	39.72	47.03	0.	0.
	R	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
150	A	0.	0.	0.	36.11	0.	0.	44.12	48.95	0.	0.
	L	0.	0.	0.	36.11	0.	0.	44.12	48.95	0.	0.
	R	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
160	A	0.	0.	0.	29.29	0.	0.	47.24	48.16	0.	0.
	L	0.	0.	0.	29.29	0.	0.	47.24	48.16	0.	0.
	R	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
170	A	0.	0.	0.	38.91	0.	0.	44.17	44.38	0.	0.
	L	0.	0.	0.	38.91	0.	0.	44.17	44.38	0.	0.
	R	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
180	A	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
	L	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.

RADIANCE VALUES ARE IN MICROWATTS. VA AND SA ARE IN DEGREES.

FIGURE 163 CONT.

IR RMS FLUCTUATION AS A FUNCTION OF SUN AZIMUTH

FILTER 5 AT 1220 AST INSOL ANGLE 42.0 DEG
SPECTRAL BAND 1.57 TO 2.98 MICRONS ELEVATION 30.5 KM

VA	0	10	20	30	40	50	60	70	80	90
SA										
R	0.	0.	0.	0.	5.06	2.81	0.	1.66	0.	0.
0 A	0.	0.	0.	0.	11.69	2.81	0.	3.74	0.	0.
L	0.	0.	0.	0.	10.54	0.	0.	3.35	0.	0.
R	0.	0.	0.	0.	8.78	0.	0.	2.33	0.	0.
10 A	0.	0.	0.	0.	12.50	0.	0.	7.04	0.	0.
L	0.	0.	0.	0.	8.89	0.	0.	6.64	0.	0.
R	0.	0.	0.	0.	12.40	0.	0.	5.84	0.	0.
20 A	0.	0.	0.	0.	12.54	0.	0.	6.36	0.	0.
L	0.	0.	0.	0.	1.86	0.	0.	2.52	0.	0.
R	0.	0.	0.	0.	12.86	3.19	0.	7.81	0.	0.
30 A	0.	0.	0.	1.61	12.86	3.19	1.96	8.54	0.	0.
L	0.	0.	0.	1.61	0.	0.	1.96	3.46	0.	0.
R	0.	0.	0.	0.	6.39	0.46	0.	5.90	0.	0.
40 A	0.	0.	0.	1.36	6.39	0.46	1.82	6.33	0.	0.
L	0.	0.	0.	1.36	0.	0.	1.82	2.30	0.	0.
R	0.	0.	0.	0.	1.10	0.	0.	2.02	0.	0.
50 A	0.	0.	0.	1.81	1.10	0.	7.49	2.83	0.	0.
L	0.	0.	0.	1.81	0.	0.	7.49	1.98	0.	0.
R	0.	0.	0.	0.	3.31	4.96	0.	1.34	0.	0.
60 A	0.	0.	0.	5.36	3.31	4.96	11.85	2.41	0.	0.
L	0.	0.	0.	5.36	0.	0.	11.85	2.01	0.	0.

RADIANCE VALUES ARE IN MICROWATTS. VA AND SA ARE IN DEGREES.

FIGURE 164

IR RMS FLUCTUATION AS A FUNCTION OF SUN AZIMUTH

FILTER 5 AT 1220 AST INSOL ANGLE 42.0 DEG
SPECTRAL BAND 1.57 TO 2.98 MICRONS ELEVATION 30.5 KM

VA	0	10	20	30	40	50	60	70	80	90
SA										
R	0.	0.	0.	0.	7.29	0.	0.	0.72	0.	0.
70 A	0.	0.	0.	6.03	7.28	0.	6.72	1.82	0.	0.
L	0.	0.	0.	6.03	0.	0.	6.72	1.68	0.	0.
R	0.	0.	0.	0.	3.01	1.40	0.	0.73	0.	0.
80 A	0.	0.	0.	7.54	3.01	1.40	4.28	1.81	0.	0.
L	0.	0.	0.	7.54	0.	0.	4.28	1.66	0.	0.
R	0.	0.	0.	0.	2.30	4.95	0.	1.67	0.	0.
90 A	0.	0.	0.	2.53	2.30	4.95	13.73	3.65	0.	0.
L	0.	0.	0.	2.53	0.	0.	13.73	3.25	0.	0.
R	0.	0.	0.	0.	5.05	1.76	0.	1.18	0.	0.
100 A	0.	0.	0.	1.79	5.05	1.76	2.99	3.97	0.	0.
L	0.	0.	0.	1.79	0.	0.	2.99	3.79	0.	0.
R	0.	0.	0.	0.	5.73	0.91	0.	0.90	0.	0.
110 A	0.	0.	0.	2.90	5.73	0.91	3.19	1.86	0.	0.
L	0.	0.	0.	2.90	0.	0.	3.19	1.62	0.	0.
R	0.	0.	0.	0.	2.44	0.	0.	2.94	0.	0.
120 A	0.	0.	0.	1.49	2.44	0.	6.42	3.37	0.	0.
L	0.	0.	0.	1.49	0.	0.	6.42	1.65	0.	0.

RADIANCE VALUES ARE IN MICROWATTS. VA AND SA ARE IN DEGREES.

FIGURE 164 CONT.

IR RMS FLUCTUATION AS A FUNCTION OF SUN AZIMUTH

FILTER 5 AT 1220 AST INSOL ANGLE 42.0 DEG
SPECTRAL BAND 1.57 TO 2.98 MICRONS ELEVATION 30.5 KM

VA	0	10	20	30	40	50	60	70	80	90
SA										
R	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
130 A	0.	0.	0.	2.39	0.	0.	4.86	2.97	0.	0.
L	0.	0.	0.	2.39	0.	0.	4.86	2.97	0.	0.
R	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
140 A	0.	0.	0.	1.76	0.	0.	3.38	3.88	0.	0.
L	0.	0.	0.	1.76	0.	0.	3.38	3.88	0.	0.
R	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
150 A	0.	0.	0.	1.66	0.	0.	4.20	2.60	0.	0.
L	0.	0.	0.	1.66	0.	0.	4.20	2.60	0.	0.
R	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
160 A	0.	0.	0.	2.90	0.	0.	3.11	2.15	0.	0.
L	0.	0.	0.	2.90	0.	0.	3.11	2.15	0.	0.
R	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
170 A	0.	0.	0.	6.74	0.	0.	3.60	1.30	0.	0.
L	0.	0.	0.	6.74	0.	0.	3.60	1.30	0.	0.
R	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
180 A	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
L	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.

RADIANCE VALUES ARE IN MICROWATTS. VA AND SA ARE IN DEGREES.

FIGURE 164 CONT.

IR NUMBER OF OBSERVATIONS AS A FUNCTION OF SCATTERING ANGLE

FILTER 5 AT 1220 AST INSOL ANGLE 42.0 DEG
SPECTRAL BAND 1.57 TO 2.98 MICRONS ELEVATION 30.5 KM

SA	VA	0	10	20	30	40	50	60	70	80	90
0		0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
10		0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
20		0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
30		0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
40		0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
50		0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
60		0.	0.	0.	0.	0.	0.	0.	60.	0.	0.
70		0.	0.	0.	0.	0.	0.	0.	1380.	0.	0.
80		0.	0.	0.	0.	0.	0.	30.	821.	0.	0.
90		0.	0.	0.	0.	750.	15.	480.	642.	0.	0.
100		0.	0.	0.	0.	599.	30.	360.	554.	0.	0.
110		0.	0.	0.	240.	420.	30.	300.	480.	0.	0.
120		0.	0.	0.	570.	300.	45.	285.	510.	0.	0.
130		0.	0.	0.	449.	330.	30.	285.	270.	0.	0.
140		0.	0.	0.	360.	194.	0.	315.	360.	0.	0.
150		0.	0.	0.	405.	0.	0.	285.	390.	0.	0.
160		0.	0.	0.	495.	0.	0.	360.	0.	0.	0.
170		0.	0.	0.	15.	0.	0.	0.	0.	0.	0.
180		0.	0.	0.	0.	0.	0.	0.	0.	0.	0.

RADIANCE VALUES ARE IN MICROWATTS. VA AND SA ARE IN DEGREES.

FIGURE 165

IR MEAN RADIANCE AS A FUNCTION OF SCATTERING ANGLE

FILTER 5 AT 1220 AST INSOL ANGLE 42.0 DEG
SPECTRAL BAND 1.57 TO 2.98 MICRONS ELEVATION 30.5 KM

SA	VA	0	10	20	30	40	50	60	70	80	90
0	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
10	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
20	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
30	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
40	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
50	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
60	0.	0.	0.	0.	0.	0.	0.	0.	46.37	0.	0.
70	0.	0.	0.	0.	0.	0.	0.	0.	46.53	0.	0.
80	0.	0.	0.	0.	0.	0.	0.	49.05	46.54	0.	0.
90	0.	0.	0.	0.	36.59	20.82	47.18	46.57	0.	0.	0.
100	0.	0.	0.	0.	25.24	31.70	42.26	45.95	0.	0.	0.
110	0.	0.	0.	38.75	34.49	33.03	35.02	45.58	0.	0.	0.
120	0.	0.	0.	36.71	24.08	23.27	34.30	44.59	0.	0.	0.
130	0.	0.	0.	38.49	20.77	19.69	43.00	47.99	0.	0.	0.
140	0.	0.	0.	38.25	25.34	0.	44.57	47.77	0.	0.	0.
150	0.	0.	0.	35.12	0.	0.	40.91	46.12	0.	0.	0.
160	0.	0.	0.	34.28	0.	0.	46.30	0.	0.	0.	0.
170	0.	0.	0.	34.54	0.	0.	0.	0.	0.	0.	0.
180	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.

RADIANCE VALUES ARE IN MICROWATTS. VA AND SA ARE IN DEGREES.

FIGURE 166

IR RMS FLUCTUATION AS A FUNCTION OF SCATTERING ANGLE

FILTER 5 AT 1220 AST INSOL ANGLE 42.0 DEG
SPECTRAL BAND 1.57 TO 2.98 MICRONS ELEVATION 30.5 KM

VA SA	0	10	20	30	40	50	60	70	80	90
0	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
10	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
20	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
30	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
40	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
50	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
60	0.	0.	0.	0.	0.	0.	0.	1.99	0.	0.
70	0.	0.	0.	0.	0.	0.	0.	5.61	0.	0.
80	0.	0.	0.	0.	0.	0.	1.37	2.79	0.	0.
90	0.	0.	0.	0.	10.08	2.81	5.27	2.41	0.	0.
100	0.	0.	0.	0.	9.11	10.76	10.27	3.29	0.	0.
110	0.	0.	0.	3.84	7.35	4.96	9.74	3.30	0.	0.
120	0.	0.	0.	7.06	3.73	6.26	5.51	1.82	0.	0.
130	0.	0.	0.	6.03	5.58	8.08	5.60	2.94	0.	0.
140	0.	0.	0.	4.05	2.28	0.	5.23	3.42	0.	0.
150	0.	0.	0.	2.45	0.	0.	3.90	2.57	0.	0.
160	0.	0.	0.	5.16	0.	0.	3.70	0.	0.	0.
170	0.	0.	0.	6.04	0.	0.	0.	0.	0.	0.
180	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.

RADIANCE VALUES ARE IN MICROWATTS. VA AND SA ARE IN DEGREES.

FIGURE 167

IR NUMBER OF OBSERVATIONS AS A FUNCTION OF SUN AZIMUTH

FILTER 4 AT 1225 AST INSOL ANGLE 42.1 DEG
SPECTRAL BAND 2.76 TO 3.25 MICRONS ELEVATION 30.5 KM

VA SA	0	10	20	30	40	50	60	70	80	90
R	0.	0.	0.	0.	105.	0.	0.	120.	0.	0.
0 A	0.	0.	0.	0.	98.	0.	0.	105.	0.	0.
L	0.	0.	0.	0.	90.	0.	0.	90.	0.	0.
R	0.	0.	0.	0.	165.	30.	0.	195.	0.	0.
10 A	0.	0.	0.	0.	188.	23.	0.	195.	0.	0.
L	0.	0.	0.	0.	210.	15.	0.	195.	0.	0.
R	0.	0.	0.	0.	210.	15.	0.	180.	0.	0.
20 A	0.	0.	0.	0.	165.	8.	0.	180.	0.	0.
L	0.	0.	0.	0.	120.	0.	0.	180.	0.	0.
R	0.	0.	0.	0.	180.	15.	0.	165.	0.	0.
30 A	0.	0.	0.	15.	90.	8.	0.	134.	0.	0.
L	0.	0.	0.	30.	0.	0.	0.	102.	0.	0.
R	0.	0.	0.	0.	208.	15.	0.	180.	0.	0.
40 A	0.	0.	0.	105.	104.	8.	0.	165.	0.	0.
L	0.	0.	0.	210.	0.	0.	0.	150.	0.	0.
R	0.	0.	0.	0.	195.	0.	0.	104.	0.	0.
50 A	0.	0.	0.	90.	98.	0.	0.	172.	0.	0.
L	0.	0.	0.	179.	0.	0.	0.	240.	0.	0.
R	0.	0.	0.	0.	210.	0.	0.	180.	0.	0.
60 A	0.	0.	0.	113.	105.	0.	0.	173.	0.	0.
L	0.	0.	0.	225.	0.	0.	0.	165.	0.	0.

RADIANCE VALUES ARE IN MICROWATTS. VA AND SA ARE IN DEGREES.

FIGURE 168

IR NUMBER OF OBSERVATIONS AS A FUNCTION OF SUN AZIMUTH

FILTER 4 AT 1225 AST INSOL ANGLE 42.1 DEG
SPECTRAL BAND 2.76 TO 3.25 MICRONS ELEVATION 30.5 KM

VA	0	10	20	30	40	50	60	70	80	90
SA										
R	0.	0.	0.	0.	210.	0.	0.	210.	0.	0.
70 A	0.	0.	0.	75.	105.	0.	0.	209.	0.	0.
L	0.	0.	0.	150.	0.	0.	0.	207.	0.	0.
R	0.	0.	0.	0.	165.	15.	0.	180.	0.	0.
80 A	0.	0.	0.	113.	83.	8.	0.	180.	0.	0.
L	0.	0.	0.	225.	0.	0.	0.	180.	0.	0.
R	0.	0.	0.	0.	210.	30.	0.	210.	0.	0.
90 A	0.	0.	0.	75.	105.	15.	0.	203.	0.	0.
L	0.	0.	0.	150.	0.	0.	0.	195.	0.	0.
R	0.	0.	0.	0.	165.	0.	0.	210.	0.	0.
100 A	0.	0.	0.	105.	83.	0.	0.	203.	0.	0.
L	0.	0.	0.	210.	0.	0.	0.	195.	0.	0.
R	0.	0.	0.	0.	180.	0.	0.	180.	0.	0.
110 A	0.	0.	0.	98.	90.	0.	0.	173.	0.	0.
L	0.	0.	0.	195.	0.	0.	0.	165.	0.	0.
R	0.	0.	0.	0.	105.	0.	0.	180.	0.	0.
120 A	0.	0.	0.	90.	53.	0.	0.	150.	0.	0.
L	0.	0.	0.	180.	0.	0.	0.	120.	0.	0.

RADIANCE VALUES ARE IN MICROWATTS. VA AND SA ARE IN DEGREES.

FIGURE 168 CONT.

IR NUMBER OF OBSERVATIONS AS A FUNCTION OF SUN AZIMUTH

FILTER 4 AT 1225 AST INSOL ANGLE 42.1 DEG
SPECTRAL BAND 2.76 TO 3.25 MICRONS ELEVATION 30.5 KM

VA SA	0	10	20	30	40	50	60	70	80	90
R	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
130 A	0.	0.	0.	98.	0.	0.	0.	68.	0.	0.
L	0.	0.	0.	195.	0.	0.	0.	135.	0.	0.
R	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
140 A	0.	0.	0.	105.	0.	0.	0.	98.	0.	0.
L	0.	0.	0.	210.	0.	0.	0.	195.	0.	0.
R	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
150 A	0.	0.	0.	98.	0.	0.	0.	90.	0.	0.
L	0.	0.	0.	195.	0.	0.	0.	180.	0.	0.
R	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
160 A	0.	0.	0.	98.	0.	0.	0.	105.	0.	0.
L	0.	0.	0.	195.	0.	0.	0.	210.	0.	0.
R	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
170 A	0.	0.	0.	30.	0.	0.	0.	53.	0.	0.
L	0.	0.	0.	60.	0.	0.	0.	105.	0.	0.
R	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
180 A	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
L	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.

RADIANCE VALUES ARE IN MICROWATTS. VA AND SA ARE IN DEGREES.

FIGURE 168 CONT.

IR MEAN RADIANCE AS A FUNCTION OF SUN AZIMUTH

FILTER 4 AT 1225 AST INSOL ANGLE 42.1 DEG
SPECTRAL BAND 2.76 TO 3.25 MICRONS ELEVATION 30.5 KM

VA	0	10	20	30	40	50	60	70	80	90
SA										
R	0.	0.	0.	0.	0.31	0.	0.	1.03	0.	0.
0 A	0.	0.	0.	0.	0.31	0.	0.	1.07	0.	0.
L	0.	0.	0.	0.	0.31	0.	0.	1.11	0.	0.
R	0.	0.	0.	0.	0.46	0.35	0.	0.69	0.	0.
10 A	0.	0.	0.	0.	0.40	0.38	0.	1.25	0.	0.
L	0.	0.	0.	0.	0.35	0.43	0.	1.82	0.	0.
R	0.	0.	0.	0.	0.45	0.36	0.	0.77	0.	0.
20 A	0.	0.	0.	0.	0.47	0.36	0.	1.28	0.	0.
L	0.	0.	0.	0.	0.50	0.	0.	1.80	0.	0.
R	0.	0.	0.	0.	0.38	0.45	0.	1.44	0.	0.
30 A	0.	0.	0.	0.63	0.38	0.45	0.	1.68	0.	0.
L	0.	0.	0.	0.63	0.	0.	0.	2.07	0.	0.
R	0.	0.	0.	0.	0.23	0.18	0.	2.07	0.	0.
40 A	0.	0.	0.	0.67	0.23	0.18	0.	2.12	0.	0.
L	0.	0.	0.	0.67	0.	0.	0.	2.18	0.	0.
R	0.	0.	0.	0.	0.95	0.	0.	1.91	0.	0.
50 A	0.	0.	0.	0.71	0.95	0.	0.	2.32	0.	0.
L	0.	0.	0.	0.71	0.	0.	0.	2.49	0.	0.
R	0.	0.	0.	0.	0.62	0.	0.	2.29	0.	0.
60 A	0.	0.	0.	0.71	0.62	0.	0.	2.15	0.	0.
L	0.	0.	0.	0.71	0.	0.	0.	2.00	0.	0.

RADIANCE VALUES ARE IN MICROWATTS. VA AND SA ARE IN DEGREES.

FIGURE 169

IR MEAN RADIANCE AS A FUNCTION OF SUN AZIMUTH

FILTER 4 AT 1225 AST INSOL ANGLE 42.1 DEG
SPECTRAL BAND 2.76 TO 3.25 MICRONS ELEVATION 30.5 KM

VA	0	10	20	30	40	50	60	70	80	90
SA										
R	0.	0.	0.	0.	0.33	0.	0.	2.01	0.	0.
70 A	0.	0.	0.	0.64	0.33	0.	0.	1.73	0.	0.
L	0.	0.	0.	0.64	0.	0.	0.	1.44	0.	0.
R	0.	0.	0.	0.	0.31	0.36	0.	2.22	0.	0.
80 A	0.	0.	0.	0.72	0.31	0.36	0.	1.52	0.	0.
L	0.	0.	0.	0.72	0.	0.	0.	0.83	0.	0.
R	0.	0.	0.	0.	0.32	0.27	0.	1.77	0.	0.
90 A	0.	0.	0.	0.61	0.32	0.27	0.	1.35	0.	0.
L	0.	0.	0.	0.61	0.	0.	0.	0.89	0.	0.
R	0.	0.	0.	0.	0.46	0.	0.	1.36	0.	0.
100 A	0.	0.	0.	0.63	0.46	0.	0.	1.42	0.	0.
L	0.	0.	0.	0.63	0.	0.	0.	1.49	0.	0.
R	0.	0.	0.	0.	0.48	0.	0.	2.95	0.	0.
110 A	0.	0.	0.	0.80	0.48	0.	0.	1.88	0.	0.
L	0.	0.	0.	0.80	0.	0.	0.	0.71	0.	0.
R	0.	0.	0.	0.	0.39	0.	0.	2.98	0.	0.
120 A	0.	0.	0.	0.80	0.39	0.	0.	1.99	0.	0.
L	0.	0.	0.	0.80	0.	0.	0.	0.50	0.	0.

RADIANCE VALUES ARE IN MICROWATTS. VA AND SA ARE IN DEGREES.

FIGURE 169 CONT.

IR MEAN RADIANCE AS A FUNCTION OF SUN AZIMUTH

FILTER 4 AT 1225 AST INSOL ANGLE 42.1 DEG
SPECTRAL BAND 2.76 TO 3.25 MICRONS ELEVATION 30.5 KM

VA	0	10	20	30	40	50	60	70	80	90
SA										
R	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
130 A	0.	0.	0.	0.68	0.	0.	0.	0.42	0.	0.
L	0.	0.	0.	0.68	0.	0.	0.	0.42	0.	0.
R	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
140 A	0.	0.	0.	0.87	0.	0.	0.	1.20	0.	0.
L	0.	0.	0.	0.87	0.	0.	0.	1.20	0.	0.
R	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
150 A	0.	0.	0.	0.58	0.	0.	0.	2.28	0.	0.
L	0.	0.	0.	0.58	0.	0.	0.	2.28	0.	0.
R	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
160 A	0.	0.	0.	0.43	0.	0.	0.	1.91	0.	0.
L	0.	0.	0.	0.43	0.	0.	0.	1.91	0.	0.
R	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
170 A	0.	0.	0.	0.45	0.	0.	0.	2.02	0.	0.
L	0.	0.	0.	0.45	0.	0.	0.	2.02	0.	0.
R	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
180 A	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
L	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.

RADIANCE VALUES ARE IN MICROWATTS. VA AND SA ARE IN DEGREES.

FIGURE 169 CONT.

IR RMS FLUCTUATION AS A FUNCTION OF SUN AZIMUTH

FILTER 4 AT 1225 AST INSOL ANGLE 42.1 DEG
SPECTRAL BAND 2.76 TO 3.25 MICRONS ELEVATION 30.5 KM

VA	0	10	20	30	40	50	60	70	80	90
SA										
R	0.	0.	0.	0.	0.19	0.	0.	0.35	0.	0.
0 A	0.	0.	0.	0.	0.27	0.	0.	0.44	0.	0.
L	0.	0.	0.	0.	0.19	0.	0.	0.28	0.	0.
R	0.	0.	0.	0.	0.20	0.16	0.	0.33	0.	0.
10 A	0.	0.	0.	0.	0.29	0.28	0.	0.49	0.	0.
L	0.	0.	0.	0.	0.21	0.24	0.	0.36	0.	0.
R	0.	0.	0.	0.	0.23	0.17	0.	0.49	0.	0.
20 A	0.	0.	0.	0.	0.31	0.17	0.	0.77	0.	0.
L	0.	0.	0.	0.	0.21	0.	0.	0.59	0.	0.
R	0.	0.	0.	0.	0.20	0.19	0.	0.45	0.	0.
30 A	0.	0.	0.	0.22	0.20	0.19	0.	0.64	0.	0.
L	0.	0.	0.	0.22	0.	0.	0.	0.45	0.	0.
R	0.	0.	0.	0.	0.18	0.13	0.	0.30	0.	0.
40 A	0.	0.	0.	0.21	0.18	0.13	0.	0.43	0.	0.
L	0.	0.	0.	0.21	0.	0.	0.	0.30	0.	0.
R	0.	0.	0.	0.	0.29	0.	0.	0.50	0.	0.
50 A	0.	0.	0.	0.20	0.29	0.	0.	0.58	0.	0.
L	0.	0.	0.	0.20	0.	0.	0.	0.30	0.	0.
R	0.	0.	0.	0.	0.28	0.	0.	0.30	0.	0.
60 A	0.	0.	0.	0.23	0.28	0.	0.	0.42	0.	0.
L	0.	0.	0.	0.23	0.	0.	0.	0.30	0.	0.

RADIANCE VALUES ARE IN MICROWATTS. VA AND SA ARE IN DEGREES.

IR RMS FLUCTUATION AS A FUNCTION OF SUN AZIMUTH

FILTER 4 AT 1225 AST INSOL ANGLE 42.1 DEG
SPECTRAL BAND 2.76 TO 3.25 MICRONS ELEVATION 30.5 KM

VA	0	10	20	30	40	50	60	70	80	90
SA										
R	0.	0.	0.	0.	0.20	0.	0.	0.29	0.	0.
70 A	0.	0.	0.	0.21	0.20	0.	0.	0.52	0.	0.
L	0.	0.	0.	0.21	0.	0.	0.	0.43	0.	0.
R	0.	0.	0.	0.	0.20	0.19	0.	0.49	0.	0.
80 A	0.	0.	0.	0.28	0.20	0.19	0.	0.55	0.	0.
L	0.	0.	0.	0.28	0.	0.	0.	0.26	0.	0.
R	0.	0.	0.	0.	0.19	0.18	0.	0.48	0.	0.
90 A	0.	0.	0.	0.25	0.19	0.18	0.	0.53	0.	0.
L	0.	0.	0.	0.25	0.	0.	0.	0.23	0.	0.
R	0.	0.	0.	0.	0.19	0.	0.	0.24	0.	0.
100 A	0.	0.	0.	0.24	0.19	0.	0.	0.43	0.	0.
L	0.	0.	0.	0.24	0.	0.	0.	0.35	0.	0.
R	0.	0.	0.	0.	0.21	0.	0.	0.80	0.	0.
110 A	0.	0.	0.	0.21	0.21	0.	0.	0.93	0.	0.
L	0.	0.	0.	0.21	0.	0.	0.	0.48	0.	0.
R	0.	0.	0.	0.	0.19	0.	0.	0.33	0.	0.
120 A	0.	0.	0.	0.20	0.19	0.	0.	0.42	0.	0.
L	0.	0.	0.	0.20	0.	0.	0.	0.26	0.	0.

RADIANCE VALUES ARE IN MICROWATTS. VA AND SA ARE IN DEGREES.

FIGURE 170 CONT.

IR RMS FLUCTUATION AS A FUNCTION OF SUN AZIMUTH

FILTER 4 AT 1225 AST INSOL ANGLE 42.1 DEG
SPECTRAL BAND 2.76 TO 3.25 MICRONS ELEVATION 30.5 KM

	VA	0	10	20	30	40	50	60	70	80	90
SA											
	R	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
130 A	0.	0.	0.	0.21	0.	0.	0.	0.	0.25	0.	0.
	L	0.	0.	0.	0.21	0.	0.	0.	0.25	0.	0.
	R	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
140 A	0.	0.	0.	0.43	0.	0.	0.	0.	0.33	0.	0.
	L	0.	0.	0.	0.43	0.	0.	0.	0.33	0.	0.
	R	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
150 A	0.	0.	0.	0.37	0.	0.	0.	0.	0.36	0.	0.
	L	0.	0.	0.	0.37	0.	0.	0.	0.36	0.	0.
	R	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
160 A	0.	0.	0.	0.21	0.	0.	0.	0.	0.46	0.	0.
	L	0.	0.	0.	0.21	0.	0.	0.	0.46	0.	0.
	R	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
170 A	0.	0.	0.	0.20	0.	0.	0.	0.	0.39	0.	0.
	L	0.	0.	0.	0.20	0.	0.	0.	0.39	0.	0.
	R	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
180 A	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
	L	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.

RADIANCE VALUES ARE IN MICROWATTS. VA AND SA ARE IN DEGREES.

FIGURE 170 CONT.

IR NUMBER OF OBSERVATIONS AS A FUNCTION OF SCATTERING ANGLE

FILTER 4 AT 1225 AST INSOL ANGLE 42.1 DEG
SPECTRAL BAND 2.76 TO 3.25 MICRONS ELEVATION 30.5 KM

SA	VA	0	10	20	30	40	50	60	70	80	90
0		0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
10		0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
20		0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
30		0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
40		0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
50		0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
60		0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
70		0.	0.	0.	0.	0.	0.	0.	1362.	0.	0.
80		0.	0.	0.	0.	0.	0.	0.	674.	0.	0.
90		0.	0.	0.	0.	840.	60.	0.	702.	0.	0.
100		0.	0.	0.	0.	658.	30.	0.	585.	0.	0.
110		0.	0.	0.	180.	450.	15.	0.	555.	0.	0.
120		0.	0.	0.	614.	345.	30.	0.	585.	0.	0.
130		0.	0.	0.	480.	300.	0.	0.	210.	0.	0.
140		0.	0.	0.	420.	135.	0.	0.	345.	0.	0.
150		0.	0.	0.	420.	0.	0.	0.	285.	0.	0.
160		0.	0.	0.	495.	0.	0.	0.	0.	0.	0.
170		0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
180		0.	0.	0.	0.	0.	0.	0.	0.	0.	0.

RADIANCE VALUES ARE IN MICROWATTS. VA AND SA ARE IN DEGREES.

FIGURE 171

IR MEAN RADIANCE AS A FUNCTION OF SCATTERING ANGLE

FILTER 4 AT 1225 AST INSOL ANGLE 42.1 DEG
SPECTRAL BAND 2.76 TO 3.25 MICRONS ELEVATION 30.5 KM

VA SA	0	10	20	30	40	50	60	70	80	90
0	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
10	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
20	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
30	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
40	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
50	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
60	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
70	0.	0.	0.	0.	0.	0.	0.	1.41	0.	0.
80	0.	0.	0.	0.	0.	0.	0.	2.25	0.	0.
90	0.	0.	0.	0.	0.41	0.37	0.	1.88	0.	0.
100	0.	0.	0.	0.	0.52	0.32	0.	1.39	0.	0.
110	0.	0.	0.	0.66	0.45	0.36	0.	1.37	0.	0.
120	0.	0.	0.	0.69	0.30	0.27	0.	1.94	0.	0.
130	0.	0.	0.	0.64	0.48	0.	0.	0.73	0.	0.
140	0.	0.	0.	0.79	0.40	0.	0.	1.86	0.	0.
150	0.	0.	0.	0.72	0.	0.	0.	1.98	0.	0.
160	0.	0.	0.	0.57	0.	0.	0.	0.	0.	0.
170	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
180	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.

RADIANCE VALUES ARE IN MICROWATTS. VA AND SA ARE IN DEGREES.

FIGURE 172

IR RMS FLUCTUATION AS A FUNCTION OF SCATTERING ANGLE

FILTER 4 AT 1225 AST INSOL ANGLE 42.1 DEG
SPECTRAL BAND 2.76 TO 3.25 MICRONS ELEVATION 30.5 KM

VA	0	10	20	30	40	50	60	70	80	90
SA										
0	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
10	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
20	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
30	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
40	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
50	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
60	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
70	0.	0.	0.	0.	0.	0.	0.	0.68	0.	0.
80	0.	0.	0.	0.	0.	0.	0.	0.41	0.	0.
90	0.	0.	0.	0.	0.22	0.19	0.	0.52	0.	0.
100	0.	0.	0.	0.	0.38	0.21	0.	0.65	0.	0.
110	0.	0.	0.	0.19	0.26	0.19	0.	0.34	0.	0.
120	0.	0.	0.	0.22	0.19	0.18	0.	1.33	0.	0.
130	0.	0.	0.	0.27	0.20	0.	0.	0.66	0.	0.
140	0.	0.	0.	0.21	0.19	0.	0.	0.56	0.	0.
150	0.	0.	0.	0.28	0.	0.	0.	0.44	0.	0.
160	0.	0.	0.	0.38	0.	0.	0.	0.	0.	0.
170	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
180	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.

RADIANCE VALUES ARE IN MICROWATTS. VA AND SA ARE IN DEGREES.

FIGURE 173

IR NUMBER OF OBSERVATIONS AS A FUNCTION OF SUN AZIMUTH

FILTER 3 AT 1230 AST INSOL ANGLE 42.2 DEG
SPECTRAL BAND 2.37 TO 2.80 MICRONS ELEVATION 30.5 KM

VA SA	0	10	20	30	40	50	60	70	80	90
R	0.	0.	0.	99.	0.	0.	120.	105.	0.	0.
0 A	0.	0.	0.	95.	0.	0.	105.	75.	0.	0.
L	0.	0.	0.	90.	0.	0.	90.	45.	0.	0.
R	0.	0.	0.	220.	0.	0.	164.	177.	0.	0.
10 A	0.	0.	0.	221.	0.	0.	162.	186.	0.	0.
L	0.	0.	0.	221.	0.	0.	160.	195.	0.	0.
R	0.	0.	0.	195.	0.	0.	176.	163.	0.	0.
20 A	0.	0.	0.	165.	0.	0.	185.	179.	0.	0.
L	0.	0.	0.	135.	0.	0.	194.	195.	0.	0.
R	0.	0.	0.	210.	0.	0.	189.	178.	0.	0.
30 A	0.	0.	0.	105.	0.	0.	102.	100.	0.	0.
L	0.	0.	0.	0.	0.	0.	15.	21.	0.	0.
R	0.	0.	0.	210.	0.	0.	120.	165.	0.	0.
40 A	0.	0.	0.	105.	0.	105.	60.	177.	0.	0.
L	0.	0.	0.	0.	0.	210.	0.	188.	0.	0.
R	0.	0.	0.	210.	0.	0.	195.	131.	0.	0.
50 A	0.	0.	0.	105.	0.	105.	98.	156.	0.	0.
L	0.	0.	0.	0.	0.	209.	0.	180.	0.	0.
R	0.	0.	0.	210.	0.	0.	225.	175.	0.	0.
60 A	0.	0.	0.	105.	0.	113.	113.	185.	0.	0.
L	0.	0.	0.	0.	0.	225.	0.	195.	0.	0.

RADIANCE VALUES ARE IN MICROWATTS. VA AND SA ARE IN DEGREES.

FIGURE 174

IR NUMBER OF OBSERVATIONS AS A FUNCTION OF SUN AZIMUTH

FILTER 3 AT 1230 AST INSOL ANGLE 42.2 DEG
SPECTRAL BAND 2.37 TO 2.80 MICRONS ELEVATION 30.5 KM

VA	0	10	20	30	40	50	60	70	80	90
SA										
R	0.	0.	0.	195.	0.	0.	195.	210.	0.	0.
70 A	0.	0.	0.	98.	0.	90.	98.	177.	0.	0.
L	0.	0.	0.	0.	0.	180.	0.	144.	0.	0.
R	0.	0.	0.	180.	0.	0.	195.	180.	0.	0.
80 A	0.	0.	0.	90.	0.	113.	98.	188.	0.	0.
L	0.	0.	0.	0.	0.	225.	0.	195.	0.	0.
R	0.	0.	0.	165.	0.	0.	223.	195.	0.	0.
90 A	0.	0.	0.	83.	0.	98.	112.	203.	0.	0.
L	0.	0.	0.	0.	0.	195.	0.	210.	0.	0.
R	0.	0.	0.	165.	0.	0.	201.	135.	0.	0.
100 A	0.	0.	0.	83.	0.	105.	101.	156.	0.	0.
L	0.	0.	0.	0.	0.	210.	0.	177.	0.	0.
R	0.	0.	0.	210.	0.	0.	194.	165.	0.	0.
110 A	0.	0.	0.	105.	0.	90.	97.	194.	0.	0.
L	0.	0.	0.	0.	0.	180.	0.	223.	0.	0.
R	0.	0.	0.	75.	0.	0.	58.	164.	0.	0.
120 A	0.	0.	0.	38.	0.	90.	29.	180.	0.	0.
L	0.	0.	0.	0.	0.	179.	0.	195.	0.	0.

RADIANCE VALUES ARE IN MICROWATTS. VA AND SA ARE IN DEGREES.

FIGURE 174 CONT.

IR NUMBER OF OBSERVATIONS AS A FUNCTION OF SUN AZIMUTH

FILTER 3 AT 1230 AST INSOL ANGLE 42.2 DEG
SPECTRAL BAND 2.37 TO 2.80 MICRONS ELEVATION 30.5 KM

VA SA	0	10	20	30	40	50	60	70	80	90
R	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
130 A	0.	0.	0.	0.	0.	98.	0.	105.	0.	0.
L	0.	0.	0.	0.	0.	195.	0.	210.	0.	0.
R	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
140 A	0.	0.	0.	0.	0.	98.	0.	105.	0.	0.
L	0.	0.	0.	0.	0.	195.	0.	210.	0.	0.
R	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
150 A	0.	0.	0.	0.	0.	105.	0.	105.	0.	0.
L	0.	0.	0.	0.	0.	210.	0.	209.	0.	0.
R	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
160 A	0.	0.	0.	0.	0.	90.	0.	106.	0.	0.
L	0.	0.	0.	0.	0.	180.	0.	212.	0.	0.
R	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
170 A	0.	0.	0.	0.	0.	83.	0.	60.	0.	0.
L	0.	0.	0.	0.	0.	165.	0.	120.	0.	0.
R	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
180 A	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
L	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.

RADIANCE VALUES ARE IN MICROWATTS. VA AND SA ARE IN DEGREES.

FIGURE 174 CONT.

IR MEAN RADIANCE AS A FUNCTION OF SUN AZIMUTH

FILTER 3 AT 1230 AST INSOL ANGLE 42.2 DEG
SPECTRAL BAND 2.37 TO 2.80 MICRONS ELEVATION 30.5 KM

VA	0	10	20	30	40	50	60	70	80	90
SA										
R	0.	0.	0.	9.44	0.	0.	28.11	24.13	0.	0.
0 A	0.	0.	0.	6.22	0.	0.	30.13	23.10	0.	0.
L	0.	0.	0.	2.67	0.	0.	32.82	20.70	0.	0.
R	0.	0.	0.	4.35	0.	0.	26.35	25.72	0.	0.
10 A	0.	0.	0.	7.83	0.	0.	21.89	17.58	0.	0.
L	0.	0.	0.	11.30	0.	0.	17.32	10.19	0.	0.
R	0.	0.	0.	3.03	0.	0.	13.96	12.62	0.	0.
20 A	0.	0.	0.	2.56	0.	0.	11.74	8.47	0.	0.
L	0.	0.	0.	1.87	0.	0.	9.72	5.00	0.	0.
R	0.	0.	0.	1.60	0.	0.	8.24	18.14	0.	0.
30 A	0.	0.	0.	1.60	0.	0.	8.53	17.66	0.	0.
L	0.	0.	0.	0.	0.	0.	12.20	13.64	0.	0.
R	0.	0.	0.	1.67	0.	0.	1.08	25.62	0.	0.
40 A	0.	0.	0.	1.67	0.	2.97	1.08	18.14	0.	0.
L	0.	0.	0.	0.	0.	2.97	0.	11.58	0.	0.
R	0.	0.	0.	1.90	0.	0.	3.69	22.01	0.	0.
50 A	0.	0.	0.	1.90	0.	1.91	3.69	13.85	0.	0.
L	0.	0.	0.	0.	0.	1.91	0.	7.90	0.	0.
R	0.	0.	0.	0.93	0.	0.	1.23	27.14	0.	0.
60 A	0.	0.	0.	0.93	0.	1.13	1.23	15.85	0.	0.
L	0.	0.	0.	0.	0.	1.13	0.	5.71	0.	0.

RADIANCE VALUES ARE IN MICROWATTS. VA AND SA ARE IN DEGREES.

FIGURE 175

IR MEAN RADIANCE AS A FUNCTION OF SUN AZIMUTH

FILTER 3 AT 1230 AST INSOL ANGLE 42.2 DEG
SPECTRAL BAND 2.37 TO 2.80 MICRONS ELEVATION 30.5 KM

VA	0	10	20	30	40	50	60	70	80	90
SA										
R	0.	0.	0.	0.70	0.	0.	1.70	33.25	0.	0.
70 A	0.	0.	0.	0.70	0.	0.77	1.70	24.01	0.	0.
L	0.	0.	0.	0.	0.	0.77	0.	10.53	0.	0.
R	0.	0.	0.	1.58	0.	0.	2.62	27.56	0.	0.
80 A	0.	0.	0.	1.58	0.	0.84	2.62	18.62	0.	0.
L	0.	0.	0.	0.	0.	0.84	0.	10.37	0.	0.
R	0.	0.	0.	1.33	0.	0.	10.26	32.45	0.	0.
90 A	0.	0.	0.	1.33	0.	1.05	10.26	20.82	0.	0.
L	0.	0.	0.	0.	0.	1.05	0.	10.03	0.	0.
R	0.	0.	0.	1.12	0.	0.	7.10	36.44	0.	0.
100 A	0.	0.	0.	1.12	0.	1.81	7.10	25.48	0.	0.
L	0.	0.	0.	0.	0.	1.81	0.	17.12	0.	0.
R	0.	0.	0.	0.78	0.	0.	8.24	34.32	0.	0.
110 A	0.	0.	0.	0.78	0.	1.31	8.24	22.38	0.	0.
L	0.	0.	0.	0.	0.	1.31	0.	13.55	0.	0.
R	0.	0.	0.	1.30	0.	0.	9.74	31.72	0.	0.
120 A	0.	0.	0.	1.30	0.	1.43	9.74	15.57	0.	0.
L	0.	0.	0.	0.	0.	1.43	0.	1.98	0.	0.

RADIANCE VALUES ARE IN MICROWATTS. VA AND SA ARE IN DEGREES.

FIGURE 175 CONT.

IR MEAN RADIANCE AS A FUNCTION OF SUN AZINUTH

FILTER 3 AT 1230 AST INSOL ANGLE 42.2 DEG
SPECTRAL BAND 2.37 TO 2.80 MICRONS ELEVATION 30.5 KM

VA	0	10	20	30	40	50	60	70	80	90
SA										
R	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
130 A	0.	0.	0.	0.	0.	1.88	0.	2.46	0.	0.
L	0.	0.	0.	0.	0.	1.88	0.	2.46	0.	0.
R	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
140 A	0.	0.	0.	0.	0.	2.82	0.	2.43	0.	0.
L	0.	0.	0.	0.	0.	2.82	0.	2.43	0.	0.
R	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
150 A	0.	0.	0.	0.	0.	3.96	0.	6.29	0.	0.
L	0.	0.	0.	0.	0.	3.96	0.	6.29	0.	0.
R	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
160 A	0.	0.	0.	0.	0.	0.94	0.	14.86	0.	0.
L	0.	0.	0.	0.	0.	0.94	0.	14.86	0.	0.
R	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
170 A	0.	0.	0.	0.	0.	0.69	0.	18.82	0.	0.
L	0.	0.	0.	0.	0.	0.69	0.	18.82	0.	0.
R	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
180 A	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
L	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.

RADIANCE VALUES ARE IN MICROWATTS. VA AND SA ARE IN DEGREES.

FIGURE 175 CONT.

IR RMS FLUCTUATION AS A FUNCTION OF SUN AZIMUTH

FILTER 3 AT 1230 AST INSOL ANGLE 42.2 DEG
SPECTRAL BAND 2.37 TO 2.80 MICRONS ELEVATION 30.5 KM

VA	0	10	20	30	40	50	60	70	80	90
SA										
R	0.	0.	0.	4.11	0.	0.	4.20	3.60	0.	0.
0 A	0.	0.	0.	4.20	0.	0.	4.48	3.77	0.	0.
L	0.	0.	0.	0.84	0.	0.	1.54	1.11	0.	0.
R	0.	0.	0.	4.01	0.	0.	5.44	5.54	0.	0.
10 A	0.	0.	0.	7.32	0.	0.	6.89	6.55	0.	0.
L	0.	0.	0.	6.12	0.	0.	4.23	3.49	0.	0.
R	0.	0.	0.	0.78	0.	0.	6.47	5.31	0.	0.
20 A	0.	0.	0.	0.99	0.	0.	7.65	5.65	0.	0.
L	0.	0.	0.	0.60	0.	0.	4.08	1.92	0.	0.
R	0.	0.	0.	0.51	0.	0.	5.61	6.77	0.	0.
30 A	0.	0.	0.	0.51	0.	0.	5.65	6.82	0.	0.
L	0.	0.	0.	0.	0.	0.	0.66	0.82	0.	0.
R	0.	0.	0.	0.33	0.	0.	0.57	5.86	0.	0.
40 A	0.	0.	0.	0.33	0.	1.28	0.57	6.22	0.	0.
L	0.	0.	0.	0.	0.	1.28	0.	2.06	0.	0.
R	0.	0.	0.	0.25	0.	0.	1.69	6.90	0.	0.
50 A	0.	0.	0.	0.25	0.	0.80	1.69	7.15	0.	0.
L	0.	0.	0.	0.	0.	0.80	0.	1.87	0.	0.
R	0.	0.	0.	0.57	0.	0.	0.71	5.83	0.	0.
60 A	0.	0.	0.	0.57	0.	2.94	0.71	6.00	0.	0.
L	0.	0.	0.	0.	0.	2.94	0.	1.44	0.	0.

RADIANCE VALUES ARE IN MICROWATTS. VA AND SA ARE IN DEGREES.

FIGURE 176

IR RMS FLUCTUATION AS A FUNCTION OF SUN AZIMUTH

FILTER 3 AT 1230 AST INSOL ANGLE 42.2 DEG
SPECTRAL BAND 2.37 TO 2.80 MICRONS ELEVATION 30.5 KM

VA	0	10	20	30	40	50	60	70	80	90
SA										
R	0.	0.	0.	0.23	0.	0.	2.31	4.08	0.	0.
70 A	0.	0.	0.	0.23	0.	0.65	2.31	5.96	0.	0.
L	0.	0.	0.	0.	0.	0.65	0.	4.35	0.	0.
R	0.	0.	0.	7.14	0.	0.	3.07	3.38	0.	0.
80 A	0.	0.	0.	7.14	0.	2.92	3.07	3.82	0.	0.
L	0.	0.	0.	0.	0.	2.92	0.	1.77	0.	0.
R	0.	0.	0.	0.29	0.	0.	5.50	2.44	0.	0.
90 A	0.	0.	0.	0.29	0.	0.29	5.50	2.72	0.	0.
L	0.	0.	0.	0.	0.	0.29	0.	1.20	0.	0.
R	0.	0.	0.	0.24	0.	0.	4.64	1.14	0.	0.
100 A	0.	0.	0.	0.24	0.	4.29	4.64	1.93	0.	0.
L	0.	0.	0.	0.	0.	4.29	0.	1.56	0.	0.
R	0.	0.	0.	0.40	0.	0.	2.61	2.01	0.	0.
110 A	0.	0.	0.	0.40	0.	0.86	2.61	5.66	0.	0.
L	0.	0.	0.	0.	0.	0.86	0.	5.29	0.	0.
R	0.	0.	0.	0.37	0.	0.	2.64	1.67	0.	0.
120 A	0.	0.	0.	0.37	0.	1.43	2.64	2.12	0.	0.
L	0.	0.	0.	0.	0.	1.43	0.	1.30	0.	0.

RADIANCE VALUES ARE IN MICROWATTS. VA AND SA ARE IN DEGREES.

FIGURE 176 CONT.

IR RMS FLUCTUATION AS A FUNCTION OF SUN AZIMUTH

FILTER 3 AT 1230 AST INSOL ANGLE 42.2 DEG
SPECTRAL BAND 2.37 TO 2.80 MICRONS ELEVATION 30.5 KM

	VA	0	10	20	30	40	50	60	70	80	90
SA											
	R	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
130	A	0.	0.	0.	0.	0.	1.49	0.	1.20	0.	0.
	L	0.	0.	0.	0.	0.	1.49	0.	1.20	0.	0.
	R	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
140	A	0.	0.	0.	0.	0.	1.55	0.	1.35	0.	0.
	L	0.	0.	0.	0.	0.	1.55	0.	1.35	0.	0.
	R	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
150	A	0.	0.	0.	0.	0.	11.75	0.	4.12	0.	0.
	L	0.	0.	0.	0.	0.	11.75	0.	4.12	0.	0.
	R	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
160	A	0.	0.	0.	0.	0.	0.59	0.	2.26	0.	0.
	L	0.	0.	0.	0.	0.	0.59	0.	2.26	0.	0.
	R	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
170	A	0.	0.	0.	0.	0.	0.32	0.	1.31	0.	0.
	L	0.	0.	0.	0.	0.	0.32	0.	1.31	0.	0.
	R	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
180	A	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
	L	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.

RADIANCE VALUES ARE IN MICROWATTS. VA AND SA ARE IN DEGREES.

FIGURE 176 CONT.

IR NUMBER OF OBSERVATIONS AS A FUNCTION OF SCATTERING ANGLE

FILTER 3 AT 1230 AST INSOL ANGLE 42.2 DEG
SPECTRAL BAND 2.37 TO 2.80 MICRONS ELEVATION 30.5 KM

VA SA	0	10	20	30	40	50	60	70	80	90
0	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
10	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
20	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
30	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
40	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
50	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
60	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
70	0.	0.	0.	0.	0.	0.	0.	1224.	0.	0.
80	0.	0.	0.	0.	0.	0.	1048.	724.	0.	0.
90	0.	0.	0.	0.	0.	0.	450.	564.	0.	0.
100	0.	0.	0.	0.	0.	494.	360.	600.	0.	0.
110	0.	0.	0.	1350.	0.	420.	373.	507.	0.	0.
120	0.	0.	0.	645.	0.	375.	291.	583.	0.	0.
130	0.	0.	0.	435.	0.	330.	192.	359.	0.	0.
140	0.	0.	0.	360.	0.	269.	0.	403.	0.	0.
150	0.	0.	0.	0.	0.	315.	0.	303.	0.	0.
160	0.	0.	0.	0.	0.	315.	0.	0.	0.	0.
170	0.	0.	0.	0.	0.	240.	0.	0.	0.	0.
180	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.

RADIANCE VALUES ARE IN MICROWATTS. VA AND SA ARE IN DEGREES.

FIGURE 177

IR MEAN RADIANCE AS A FUNCTION OF SCATTERING ANGLE

FILTER 3 AT 1230 AST INSOL ANGLE 42.2 DEG
SPECTRAL BAND 2.37 TO 2.80 MICRONS ELEVATION 30.5 KM

VA	0	10	20	30	40	50	60	70	80	90
SA										
0	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
10	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
20	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
30	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
40	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
50	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
60	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
70	0.	0.	0.	0.	0.	0.	0.	15.97	0.	0.
80	0.	0.	0.	0.	0.	0.	18.39	15.29	0.	0.
90	0.	0.	0.	0.	0.	0.	2.74	21.40	0.	0.
100	0.	0.	0.	0.	0.	2.24	1.28	19.33	0.	0.
110	0.	0.	0.	4.52	0.	0.98	6.65	24.13	0.	0.
120	0.	0.	0.	1.22	0.	0.89	7.52	20.14	0.	0.
130	0.	0.	0.	1.38	0.	1.71	8.94	4.77	0.	0.
140	0.	0.	0.	0.96	0.	1.12	0.	5.14	0.	0.
150	0.	0.	0.	0.	0.	2.79	0.	16.39	0.	0.
160	0.	0.	0.	0.	0.	2.89	0.	0.	0.	0.
170	0.	0.	0.	0.	0.	0.85	0.	0.	0.	0.
180	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.

RADIANCE VALUES ARE IN MICROWATTS. VA AND SA ARE IN DEGREES.

FIGURE 178

IR RMS FLUCTUATION AS A FUNCTION OF SCATTERING ANGLE

FILTER 3 AT 1230 AST INSOL ANGLE 42.2 DEG
SPECTRAL BAND 2.37 TO 2.80 MICRONS ELEVATION 30.5 KM

VA	0	10	20	30	40	50	60	70	80	90
SA										
0	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
10	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
20	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
30	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
40	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
50	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
60	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
70	0.	0.	0.	0.	0.	0.	0.	8.73	0.	0.
80	0.	0.	0.	0.	0.	0.	9.38	9.15	0.	0.
90	0.	0.	0.	0.	0.	0.	1.95	12.38	0.	0.
100	0.	0.	0.	0.	0.	1.21	1.77	10.17	0.	0.
110	0.	0.	0.	4.82	0.	3.05	6.03	10.19	0.	0.
120	0.	0.	0.	0.65	0.	0.37	4.26	13.18	0.	0.
130	0.	0.	0.	4.60	0.	3.48	2.39	7.92	0.	0.
140	0.	0.	0.	0.43	0.	1.25	0.	4.63	0.	0.
150	0.	0.	0.	0.	0.	1.45	0.	2.84	0.	0.
160	0.	0.	0.	0.	0.	9.71	0.	0.	0.	0.
170	0.	0.	0.	0.	0.	0.58	0.	0.	0.	0.
180	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.

RADIANCE VALUES ARE IN MICROWATTS. VA AND SA ARE IN DEGREES.

FIGURE 179

IR NUMBER OF OBSERVATIONS AS A FUNCTION OF SUN AZIMUTH

FILTER 2 AT 1235 AST INSOL ANGLE 42.3 DEG
SPECTRAL BAND 2.63 TO 2.80 MICRONS ELEVATION 30.5 KM

VA SA	0	10	20	30	40	50	60	70	80	90
R	0.	0.	0.	30.	0.	0.	0.	90.	0.	0.
0 A	0.	0.	0.	68.	0.	0.	0.	90.	0.	0.
L	0.	0.	0.	105.	0.	0.	0.	90.	0.	0.
R	0.	0.	0.	195.	0.	0.	0.	195.	0.	0.
10 A	0.	0.	0.	188.	0.	0.	0.	165.	0.	0.
L	0.	0.	0.	180.	0.	0.	0.	134.	0.	0.
R	0.	0.	0.	180.	0.	0.	0.	180.	0.	0.
20 A	0.	0.	0.	158.	0.	0.	0.	188.	0.	0.
L	0.	0.	0.	135.	0.	0.	0.	195.	0.	0.
R	0.	0.	0.	192.	0.	0.	0.	165.	0.	0.
30 A	0.	0.	0.	96.	0.	0.	0.	128.	0.	0.
L	0.	0.	0.	0.	0.	0.	0.	90.	0.	0.
R	0.	0.	0.	120.	0.	0.	0.	180.	0.	0.
40 A	0.	0.	0.	60.	0.	75.	0.	180.	0.	0.
L	0.	0.	0.	0.	0.	150.	0.	180.	0.	0.
R	0.	0.	0.	255.	0.	0.	0.	150.	0.	0.
50 A	0.	0.	0.	128.	0.	105.	0.	165.	0.	0.
L	0.	0.	0.	0.	0.	210.	0.	180.	0.	0.
R	0.	0.	0.	195.	0.	0.	0.	195.	0.	0.
60 A	0.	0.	0.	98.	0.	83.	0.	180.	0.	0.
L	0.	0.	0.	0.	0.	165.	0.	165.	0.	0.

RADIANCE VALUES ARE IN MICROWATTS. VA AND SA ARE IN DEGREES.

FIGURE 180

IR NUMBER OF OBSERVATIONS AS A FUNCTION OF SUN AZIMUTH

FILTER 2 AT 1235 AST INSOL ANGLE 42.3 DEG
SPECTRAL BAND 2.63 TO 2.80 MICRONS ELEVATION 30.5 KM

VA	0	10	20	30	40	50	60	70	80	90
SA										
R	0.	0.	0.	225.	0.	0.	0.	165.	0.	0.
70 A	0.	0.	0.	113.	0.	97.	0.	173.	0.	0.
L	0.	0.	0.	0.	0.	194.	0.	180.	0.	0.
R	0.	0.	0.	209.	0.	0.	0.	195.	0.	0.
80 A	0.	0.	0.	105.	8.	83.	0.	180.	0.	0.
L	0.	0.	0.	0.	15.	165.	0.	164.	0.	0.
R	0.	0.	0.	179.	0.	0.	0.	195.	0.	0.
90 A	0.	0.	0.	90.	0.	105.	0.	188.	0.	0.
L	0.	0.	0.	0.	0.	210.	0.	180.	0.	0.
R	0.	0.	0.	225.	0.	0.	0.	180.	0.	0.
100 A	0.	0.	0.	113.	0.	120.	0.	165.	0.	0.
L	0.	0.	0.	0.	0.	240.	0.	150.	0.	0.
R	0.	0.	0.	194.	0.	0.	0.	120.	0.	0.
110 A	0.	0.	0.	97.	0.	90.	0.	143.	0.	0.
L	0.	0.	0.	0.	0.	180.	0.	165.	0.	0.
R	0.	0.	0.	60.	0.	0.	0.	0.	0.	0.
120 A	0.	0.	0.	30.	0.	113.	0.	90.	0.	0.
L	0.	0.	0.	0.	0.	225.	0.	180.	0.	0.

RADIANCE VALUES ARE IN MICROWATTS. VA AND SA ARE IN DEGREES.

FIGURE 180 CONT.

IR NUMBER OF OBSERVATIONS AS A FUNCTION OF SUN AZIMUTH

FILTER 2 AT 1235 AST INSOL ANGLE 42.3 DEG
SPECTRAL BAND 2.63 TO 2.80 MICRONS ELEVATION 30.5 KM

VA SA	0	10	20	30	40	50	60	70	80	90
R	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
130 A	0.	0.	0.	0.	0.	90.	0.	68.	0.	0.
L	0.	0.	0.	0.	0.	179.	0.	135.	0.	0.
R	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
140 A	0.	0.	0.	0.	0.	103.	0.	98.	0.	0.
L	0.	0.	0.	0.	0.	206.	0.	195.	0.	0.
R	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
150 A	0.	0.	0.	0.	0.	90.	0.	105.	0.	0.
L	0.	0.	0.	0.	0.	180.	0.	210.	0.	0.
R	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
160 A	0.	0.	0.	0.	0.	98.	0.	75.	0.	0.
L	0.	0.	0.	0.	0.	195.	0.	150.	0.	0.
R	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
170 A	0.	0.	0.	0.	0.	75.	0.	83.	0.	0.
L	0.	0.	0.	0.	0.	150.	0.	165.	0.	0.
R	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
180 A	0.	0.	0.	0.	0.	0.	0.	30.	0.	0.
L	0.	0.	0.	0.	0.	0.	0.	60.	0.	0.

RADIANCE VALUES ARE IN MICROWATTS. VA AND SA ARE IN DEGREES.

FIGURE 180 CONT.

IR MEAN RADIANCE AS A FUNCTION OF SUN AZIMUTH

FILTER 2 AT 1235 AST INSOL ANGLE 42.3 DEG
SPECTRAL BAND 2.63 TO 2.80 MICRONS ELEVATION 30.5 KM

VA	0	10	20	30	40	50	60	70	80	90
SA										
R	0.	0.	0.	0.19	0.	0.	0.	0.15	0.	0.
0 A	0.	0.	0.	0.18	0.	0.	0.	0.16	0.	0.
L	0.	0.	0.	0.18	0.	0.	0.	0.16	0.	0.
R	0.	0.	0.	0.19	0.	0.	0.	0.16	0.	0.
10 A	0.	0.	0.	0.17	0.	0.	0.	0.17	0.	0.
L	0.	0.	0.	0.16	0.	0.	0.	0.18	0.	0.
R	0.	0.	0.	0.19	0.	0.	0.	0.17	0.	0.
20 A	0.	0.	0.	0.18	0.	0.	0.	0.17	0.	0.
L	0.	0.	0.	0.17	0.	0.	0.	0.17	0.	0.
R	0.	0.	0.	0.18	0.	0.	0.	0.16	0.	0.
30 A	0.	0.	0.	0.18	0.	0.	0.	0.16	0.	0.
L	0.	0.	0.	0.	0.	0.	0.	0.17	0.	0.
R	0.	0.	0.	0.17	0.	0.	0.	0.17	0.	0.
40 A	0.	0.	0.	0.17	0.	0.18	0.	0.16	0.	0.
L	0.	0.	0.	0.	0.	0.18	0.	0.16	0.	0.
R	0.	0.	0.	0.16	0.	0.	0.	0.18	0.	0.
50 A	0.	0.	0.	0.16	0.	0.15	0.	0.17	0.	0.
L	0.	0.	0.	0.	0.	0.15	0.	0.16	0.	0.
R	0.	0.	0.	0.18	0.	0.	0.	0.15	0.	0.
60 A	0.	0.	0.	0.18	0.	0.18	0.	0.15	0.	0.
L	0.	0.	0.	0.	0.	0.18	0.	0.16	0.	0.

RADIANCE VALUES ARE IN MICROWATTS. VA AND SA ARE IN DEGREES.

FIGURE 181

IR MEAN RADIANCE AS A FUNCTION OF SUN AZIMUTH

FILTER 2 AT 1235 AST INSOL ANGLE 42.3 DEG
SPECTRAL BAND 2.63 TO 2.80 MICRONS ELEVATION 30.5 KM

VA	0	10	20	30	40	50	60	70	80	90
SA										
R	0.	0.	0.	0.18	0.	0.	0.	0.16	0.	0.
70 A	0.	0.	0.	0.18	0.	0.17	0.	0.16	0.	0.
L	0.	0.	0.	0.	0.	0.17	0.	0.17	0.	0.
R	0.	0.	0.	0.17	0.	0.	0.	0.17	0.	0.
80 A	0.	0.	0.	0.17	0.22	0.17	0.	0.16	0.	0.
L	0.	0.	0.	0.	0.22	0.17	0.	0.16	0.	0.
R	0.	0.	0.	0.17	0.	0.	0.	0.16	0.	0.
90 A	0.	0.	0.	0.17	0.	0.17	0.	0.17	0.	0.
L	0.	0.	0.	0.	0.	0.17	0.	0.18	0.	0.
R	0.	0.	0.	0.16	0.	0.	0.	0.17	0.	0.
100 A	0.	0.	0.	0.16	0.	0.17	0.	0.17	0.	0.
L	0.	0.	0.	0.	0.	0.17	0.	0.16	0.	0.
R	0.	0.	0.	0.15	0.	0.	0.	0.16	0.	0.
110 A	0.	0.	0.	0.15	0.	0.17	0.	0.17	0.	0.
L	0.	0.	0.	0.	0.	0.17	0.	0.18	0.	0.
R	0.	0.	0.	0.17	0.	0.	0.	0.	0.	0.
120 A	0.	0.	0.	0.17	0.	0.17	0.	0.17	0.	0.
L	0.	0.	0.	0.	0.	0.17	0.	0.17	0.	0.

RADIANCE VALUES ARE IN MICROWATTS. VA AND SA ARE IN DEGREES.

FIGURE 181 CONT.

IR MEAN RADIANCE AS A FUNCTION OF SUN AZIMUTH

FILTER 2 AT 1235 AST INSOL ANGLE 42.3 DEG
SPECTRAL BAND 2.63 TO 2.80 MICRONS ELEVATION 30.5 KM

	VA	0	10	20	30	40	50	60	70	80	90
SA											
	R	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
130	A	0.	0.	0.	0.	0.	0.16	0.	0.17	0.	0.
	L	0.	0.	0.	0.	0.	0.16	0.	0.17	0.	0.
	R	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
140	A	0.	0.	0.	0.	0.	0.17	0.	0.17	0.	0.
	L	0.	0.	0.	0.	0.	0.17	0.	0.17	0.	0.
	R	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
150	A	0.	0.	0.	0.	0.	0.16	0.	0.16	0.	0.
	L	0.	0.	0.	0.	0.	0.16	0.	0.16	0.	0.
	R	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
160	A	0.	0.	0.	0.	0.	0.17	0.	0.17	0.	0.
	L	0.	0.	0.	0.	0.	0.17	0.	0.17	0.	0.
	R	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
170	A	0.	0.	0.	0.	0.	0.15	0.	0.17	0.	0.
	L	0.	0.	0.	0.	0.	0.15	0.	0.17	0.	0.
	R	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
180	A	0.	0.	0.	0.	0.	0.	0.	0.17	0.	0.
	L	0.	0.	0.	0.	0.	0.	0.	0.17	0.	0.

RADIANCE VALUES ARE IN MICROWATTS. VA AND SA ARE IN DEGREES.

FIGURE 181 CONT.

IR RMS FLUCTUATION AS A FUNCTION OF SUN AZIMUTH

FILTER 2 AT 1235 AST INSOL ANGLE 42.3 DEG
SPECTRAL BAND 2.63 TO 2.80 MICRONS ELEVATION 30.5 KM

VA	0	10	20	30	40	50	60	70	80	90
SA										
R	0.	0.	0.	0.15	0.	0.	0.	0.12	0.	0.
0 A	0.	0.	0.	0.20	0.	0.	0.	0.17	0.	0.
L	0.	0.	0.	0.13	0.	0.	0.	0.13	0.	0.
R	0.	0.	0.	0.12	0.	0.	0.	0.12	0.	0.
10 A	0.	0.	0.	0.18	0.	0.	0.	0.18	0.	0.
L	0.	0.	0.	0.13	0.	0.	0.	0.14	0.	0.
R	0.	0.	0.	0.14	0.	0.	0.	0.12	0.	0.
20 A	0.	0.	0.	0.19	0.	0.	0.	0.17	0.	0.
L	0.	0.	0.	0.12	0.	0.	0.	0.12	0.	0.
R	0.	0.	0.	0.14	0.	0.	0.	0.12	0.	0.
30 A	0.	0.	0.	0.14	0.	0.	0.	0.17	0.	0.
L	0.	0.	0.	0.	0.	0.	0.	0.13	0.	0.
R	0.	0.	0.	0.12	0.	0.	0.	0.11	0.	0.
40 A	0.	0.	0.	0.12	0.	0.12	0.	0.17	0.	0.
L	0.	0.	0.	0.	0.	0.12	0.	0.12	0.	0.
R	0.	0.	0.	0.12	0.	0.	0.	0.14	0.	0.
50 A	0.	0.	0.	0.12	0.	0.12	0.	0.19	0.	0.
L	0.	0.	0.	0.	0.	0.12	0.	0.13	0.	0.
R	0.	0.	0.	0.14	0.	0.	0.	0.11	0.	0.
60 A	0.	0.	0.	0.14	0.	0.14	0.	0.16	0.	0.
L	0.	0.	0.	0.	0.	0.14	0.	0.12	0.	0.

RADIANCE VALUES ARE IN MICROWATTS. VA AND SA ARE IN DEGREES.

FIGURE 182

IR RMS FLUCTUATION AS A FUNCTION OF SUN AZIMUTH

FILTER 2 AT 1235 AST INSOL ANGLE 42.3 DEG
SPECTRAL BAND 2.63 TO 2.80 MICRONS ELEVATION 30.5 KM

VA	0	10	20	30	40	50	60	70	80	90
SA										
R	0.	0.	0.	0.14	0.	0.	0.	0.12	0.	0.
70 A	0.	0.	0.	0.14	0.	0.13	0.	0.17	0.	0.
L	0.	0.	0.	0.	0.	0.13	0.	0.12	0.	0.
R	0.	0.	0.	0.14	0.	0.	0.	0.13	0.	0.
80 A	0.	0.	0.	0.14	0.11	0.13	0.	0.18	0.	0.
L	0.	0.	0.	0.	0.11	0.13	0.	0.12	0.	0.
R	0.	0.	0.	0.13	0.	0.	0.	0.12	0.	0.
90 A	0.	0.	0.	0.13	0.	0.12	0.	0.18	0.	0.
L	0.	0.	0.	0.	0.	0.12	0.	0.13	0.	0.
R	0.	0.	0.	0.12	0.	0.	0.	0.12	0.	0.
100 A	0.	0.	0.	0.12	0.	0.13	0.	0.17	0.	0.
L	0.	0.	0.	0.	0.	0.13	0.	0.12	0.	0.
R	0.	0.	0.	0.11	0.	0.	0.	0.11	0.	0.
110 A	0.	0.	0.	0.11	0.	0.12	0.	0.18	0.	0.
L	0.	0.	0.	0.	0.	0.12	0.	0.14	0.	0.
R	0.	0.	0.	0.13	0.	0.	0.	0.	0.	0.
120 A	0.	0.	0.	0.13	0.	0.12	0.	0.13	0.	0.
L	0.	0.	0.	0.	0.	0.12	0.	0.13	0.	0.

RADIANCE VALUES ARE IN MICROWATTS. VA AND SA ARE IN DEGREES.

FIGURE 182 CONT.

IR RMS FLUCTUATION AS A FUNCTION OF SUN AZIMUTH

FILTER 2 AT 1235 AST INSOL ANGLE 42.3 DEG
SPECTRAL BAND 2.63 TO 2.80 MICRONS ELEVATION 30.5 KM

	VA	0	10	20	30	40	50	60	70	80	90
SA											
	R	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
130	A	0.	0.	0.	0.	0.	0.12	0.	0.13	0.	0.
	L	0.	0.	0.	0.	0.	0.12	0.	0.13	0.	0.
	R	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
140	A	0.	0.	0.	0.	0.	0.12	0.	0.12	0.	0.
	L	0.	0.	0.	0.	0.	0.12	0.	0.12	0.	0.
	R	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
150	A	0.	0.	0.	0.	0.	0.12	0.	0.13	0.	0.
	L	0.	0.	0.	0.	0.	0.12	0.	0.13	0.	0.
	R	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
160	A	0.	0.	0.	0.	0.	0.14	0.	0.12	0.	0.
	L	0.	0.	0.	0.	0.	0.14	0.	0.12	0.	0.
	R	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
170	A	0.	0.	0.	0.	0.	0.12	0.	0.13	0.	0.
	L	0.	0.	0.	0.	0.	0.12	0.	0.13	0.	0.
	R	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
180	A	0.	0.	0.	0.	0.	0.	0.	0.13	0.	0.
	L	0.	0.	0.	0.	0.	0.	0.	0.13	0.	0.

RADIANCE VALUES ARE IN MICROWATTS. VA AND SA ARE IN DEGREES.

FIGURE 182 CONT.

IR NUMBER OF OBSERVATIONS AS A FUNCTION OF SCATTERING ANGLE

FILTER 2 AT 1235 AST INSOL ANGLE 42.3 DEG
SPECTRAL BAND 2.63 TO 2.80 MICRONS ELEVATION 30.5 KM

SA	VA	0	10	20	30	40	50	60	70	80	90
0		0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
10		0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
20		0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
30		0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
40		0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
50		0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
60		0.	0.	0.	0.	0.	0.	0.	284.	0.	0.
70		0.	0.	0.	0.	0.	0.	0.	1065.	0.	0.
80		0.	0.	0.	0.	0.	0.	0.	690.	0.	0.
90		0.	0.	0.	0.	0.	0.	0.	585.	0.	0.
100		0.	0.	0.	0.	0.	405.	0.	554.	0.	0.
110		0.	0.	0.	1182.	0.	389.	0.	495.	0.	0.
120		0.	0.	0.	645.	15.	360.	0.	315.	0.	0.
130		0.	0.	0.	493.	0.	330.	0.	225.	0.	0.
140		0.	0.	0.	359.	0.	315.	0.	390.	0.	0.
150		0.	0.	0.	0.	0.	310.	0.	375.	0.	0.
160		0.	0.	0.	0.	0.	270.	0.	0.	0.	0.
170		0.	0.	0.	0.	0.	270.	0.	0.	0.	0.
180		0.	0.	0.	0.	0.	0.	0.	0.	0.	0.

RADIANCE VALUES ARE IN MICROWATTS. VA AND SA ARE IN DEGREES.

FIGURE 183

IR MEAN RADIANCE AS A FUNCTION OF SCATTERING ANGLE

FILTER 2 AT 1235 AST INSOL ANGLE 42.3 DEG
SPECTRAL BAND 2.63 TO 2.80 MICRONS ELEVATION 30.5 KM

VA SA	0	10	20	30	40	50	60	70	80	90
0	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
10	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
20	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
30	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
40	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
50	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
60	0.	0.	0.	0.	0.	0.	0.	0.16	0.	0.
70	0.	0.	0.	0.	0.	0.	0.	0.17	0.	0.
80	0.	0.	0.	0.	0.	0.	0.	0.16	0.	0.
90	0.	0.	0.	0.	0.	0.	0.	0.17	0.	0.
100	0.	0.	0.	0.	0.	0.17	0.	0.17	0.	0.
110	0.	0.	0.	0.18	0.	0.17	0.	0.16	0.	0.
120	0.	0.	0.	0.18	0.22	0.17	0.	0.18	0.	0.
130	0.	0.	0.	0.17	0.	0.17	0.	0.17	0.	0.
140	0.	0.	0.	0.16	0.	0.17	0.	0.17	0.	0.
150	0.	0.	0.	0.	0.	0.17	0.	0.17	0.	0.
160	0.	0.	0.	0.	0.	0.17	0.	0.	0.	0.
170	0.	0.	0.	0.	0.	0.16	0.	0.	0.	0.
180	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.

RADIANCE VALUES ARE IN MICROWATTS. VA AND SA ARE IN DEGREES.

FIGURE 184

IR RMS FLUCTUATION AS A FUNCTION OF SCATTERING ANGLE

FILTER 2 AT 1235 AST INSOL ANGLE 42.3 DEG
SPECTRAL BAND 2.63 TO 2.80 MICRONS ELEVATION 30.5 KM

VA	0	10	20	30	40	50	60	70	80	90
SA										
0	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
10	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
20	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
30	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
40	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
50	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
60	0.	0.	0.	0.	0.	0.	0.	0.13	0.	0.
70	0.	0.	0.	0.	0.	0.	0.	0.12	0.	0.
80	0.	0.	0.	0.	0.	0.	0.	0.12	0.	0.
90	0.	0.	0.	0.	0.	0.	0.	0.12	0.	0.
100	0.	0.	0.	0.	0.	0.12	0.	0.13	0.	0.
110	0.	0.	0.	0.13	0.	0.13	0.	0.12	0.	0.
120	0.	0.	0.	0.14	0.11	0.13	0.	0.14	0.	0.
130	0.	0.	0.	0.13	0.	0.13	0.	0.12	0.	0.
140	0.	0.	0.	0.12	0.	0.12	0.	0.13	0.	0.
150	0.	0.	0.	0.	0.	0.12	0.	0.12	0.	0.
160	0.	0.	0.	0.	0.	0.13	0.	0.	0.	0.
170	0.	0.	0.	0.	0.	0.13	0.	0.	0.	0.
180	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.

RADIANCE VALUES ARE IN MICROWATTS. VA AND SA ARE IN DEGREES.

FIGURE 185

IR NUMBER OF OBSERVATIONS AS A FUNCTION OF SUN AZIMUTH

FILTER 1 AT 1240 AST INSOL ANGLE 42.4 DEG
SPECTRAL BAND 2.50 TO 2.80 MICRONS ELEVATION 30.5 KM

VA SA	0	10	20	30	40	50	60	70	80	90
R	0.	0.	0.	0.	0.	0.	0.	105.	0.	0.
0 A	0.	0.	0.	0.	0.	0.	0.	98.	0.	0.
L	0.	0.	0.	0.	0.	0.	0.	90.	0.	0.
R	0.	0.	0.	0.	0.	0.	0.	195.	0.	0.
10 A	0.	0.	0.	0.	0.	0.	0.	210.	0.	0.
L	0.	0.	0.	0.	0.	0.	0.	225.	0.	0.
R	0.	0.	0.	0.	0.	0.	0.	195.	0.	0.
20 A	0.	0.	0.	0.	0.	0.	0.	195.	0.	0.
L	0.	0.	0.	0.	0.	0.	0.	195.	0.	0.
R	0.	0.	0.	0.	0.	0.	0.	210.	0.	0.
30 A	0.	0.	0.	0.	0.	0.	0.	180.	0.	0.
L	0.	0.	0.	0.	0.	0.	0.	150.	0.	0.
R	0.	0.	0.	0.	0.	0.	0.	180.	0.	0.
40 A	0.	0.	0.	45.	0.	0.	0.	203.	0.	0.
L	0.	0.	0.	90.	0.	0.	0.	225.	0.	0.
R	0.	0.	0.	0.	0.	0.	0.	165.	0.	0.
50 A	0.	0.	0.	113.	0.	0.	0.	180.	0.	0.
L	0.	0.	0.	225.	0.	0.	0.	195.	0.	0.
R	0.	0.	0.	0.	0.	0.	0.	210.	0.	0.
60 A	0.	0.	0.	90.	0.	0.	98.	203.	0.	0.
L	0.	0.	0.	180.	0.	0.	195.	195.	0.	0.

RADIANCE VALUES ARE IN MICROWATTS. VA AND SA ARE IN DEGREES.

FIGURE 186

IR NUMBER OF OBSERVATIONS AS A FUNCTION OF SUN AZIMUTH

FILTER 1 AT 1240 AST INSOL ANGLE 42.4 DEG
SPECTRAL BAND 2.50 TO 2.80 MICRONS ELEVATION 30.5 KM

VA	0	10	20	30	40	50	60	70	80	90
SA										
R	0.	0.	0.	0.	0.	0.	0.	210.	0.	0.
70 A	0.	0.	0.	90.	0.	0.	90.	210.	0.	0.
L	0.	0.	0.	180.	0.	0.	180.	210.	0.	0.
R	0.	0.	0.	0.	0.	0.	0.	120.	0.	0.
80 A	0.	0.	0.	15.	0.	0.	98.	143.	0.	0.
L	0.	0.	0.	30.	0.	0.	195.	165.	0.	0.
R	0.	0.	0.	0.	0.	0.	0.	195.	0.	0.
90 A	0.	0.	0.	0.	0.	0.	105.	188.	0.	0.
L	0.	0.	0.	0.	0.	0.	210.	180.	0.	0.
R	0.	0.	0.	0.	0.	0.	0.	210.	0.	0.
100 A	0.	0.	0.	0.	0.	0.	105.	188.	0.	0.
L	0.	0.	0.	0.	0.	0.	210.	165.	0.	0.
R	0.	0.	0.	0.	0.	0.	0.	225.	0.	0.
110 A	0.	0.	0.	0.	0.	0.	83.	188.	0.	0.
L	0.	0.	0.	0.	0.	0.	165.	150.	0.	0.
R	0.	0.	0.	0.	0.	0.	0.	30.	0.	0.
120 A	0.	0.	0.	0.	0.	0.	113.	113.	0.	0.
L	0.	0.	0.	0.	0.	0.	225.	195.	0.	0.

RADIANCE VALUES ARE IN MICROWATTS. VA AND SA ARE IN DEGREES.

FIGURE 186 CONT.

IR NUMBER OF OBSERVATIONS AS A FUNCTION OF SUN AZIMUTH

FILTER 1 AT 1240 AST INSOL ANGLE 42.4 DEG
SPECTRAL BAND 2.50 TO 2.80 MICRONS ELEVATION 30.5 KM

VA SA	0	10	20	30	40	50	60	70	80	90
R	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
130 A	0.	0.	0.	0.	0.	0.	105.	90.	0.	0.
L	0.	0.	0.	0.	0.	0.	210.	180.	0.	0.
R	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
140 A	0.	0.	0.	0.	0.	0.	90.	90.	0.	0.
L	0.	0.	0.	0.	0.	0.	180.	180.	0.	0.
R	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
150 A	0.	0.	0.	0.	0.	0.	120.	90.	0.	0.
L	0.	0.	0.	0.	0.	0.	240.	180.	0.	0.
R	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
160 A	0.	0.	0.	0.	0.	0.	52.	90.	0.	0.
L	0.	0.	0.	0.	0.	0.	104.	180.	0.	0.
R	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
170 A	0.	0.	0.	0.	0.	0.	105.	90.	0.	0.
L	0.	0.	0.	0.	0.	0.	210.	180.	0.	0.
R	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
180 A	0.	0.	0.	0.	0.	0.	38.	37.	0.	0.
L	0.	0.	0.	0.	0.	0.	75.	74.	0.	0.

RADIANCE VALUES ARE IN MICROWATTS. VA AND SA ARE IN DEGREES.

FIGURE 186 CONT.

IR MEAN RADIANCE AS A FUNCTION OF SUN AZIMUTH

FILTER 1 AT 1240 AST INSOL ANGLE 42.4 DEG
SPECTRAL BAND 2.50 TO 2.80 MICRONS ELEVATION 30.5 KM

VA	0	10	20	30	40	50	60	70	80	90
SA										
R	0.	0.	0.	0.	0.	0.	0.	0.17	0.	0.
0 A	0.	0.	0.	0.	0.	0.	0.	0.23	0.	0.
L	0.	0.	0.	0.	0.	0.	0.	0.31	0.	0.
R	0.	0.	0.	0.	0.	0.	0.	0.16	0.	0.
10 A	0.	0.	0.	0.	0.	0.	0.	0.45	0.	0.
L	0.	0.	0.	0.	0.	0.	0.	0.70	0.	0.
R	0.	0.	0.	0.	0.	0.	0.	0.27	0.	0.
20 A	0.	0.	0.	0.	0.	0.	0.	0.63	0.	0.
L	0.	0.	0.	0.	0.	0.	0.	0.99	0.	0.
R	0.	0.	0.	0.	0.	0.	0.	0.69	0.	0.
30 A	0.	0.	0.	0.	0.	0.	0.	1.36	0.	0.
L	0.	0.	0.	0.	0.	0.	0.	2.31	0.	0.
R	0.	0.	0.	0.	0.	0.	0.	0.57	0.	0.
40 A	0.	0.	0.	0.17	0.	0.	0.	0.40	0.	0.
L	0.	0.	0.	0.17	0.	0.	0.	0.28	0.	0.
R	0.	0.	0.	0.	0.	0.	0.	0.44	0.	0.
50 A	0.	0.	0.	0.16	0.	0.	0.	0.34	0.	0.
L	0.	0.	0.	0.16	0.	0.	0.	0.26	0.	0.
R	0.	0.	0.	0.	0.	0.	0.	0.74	0.	0.
60 A	0.	0.	0.	0.16	0.	0.	0.18	0.46	0.	0.
L	0.	0.	0.	0.16	0.	0.	0.18	0.17	0.	0.

RADIANCE VALUES ARE IN MICROWATTS. VA AND SA ARE IN DEGREES.

FIGURE 187

IR MEAN RADIANCE AS A FUNCTION OF SUN AZIMUTH

FILTER 1 AT 1240 AST INSOL ANGLE 42.4 DEG
SPECTRAL BAND 2.50 TO 2.80 MICRONS ELEVATION 30.5 KM

VA	0	10	20	30	40	50	60	70	80	90
SA										
R	0.	0.	0.	0.	0.	0.	0.	0.46	0.	0.
70 A	0.	0.	0.	0.19	0.	0.	0.19	0.34	0.	0.
L	0.	0.	0.	0.19	0.	0.	0.19	0.21	0.	0.
R	0.	0.	0.	0.	0.	0.	0.	0.32	0.	0.
80 A	0.	0.	0.	0.19	0.	0.	0.20	0.24	0.	0.
L	0.	0.	0.	0.19	0.	0.	0.20	0.19	0.	0.
R	0.	0.	0.	0.	0.	0.	0.	0.29	0.	0.
90 A	0.	0.	0.	0.	0.	0.	0.20	0.25	0.	0.
L	0.	0.	0.	0.	0.	0.	0.20	0.20	0.	0.
R	0.	0.	0.	0.	0.	0.	0.	0.21	0.	0.
100 A	0.	0.	0.	0.	0.	0.	0.18	0.25	0.	0.
L	0.	0.	0.	0.	0.	0.	0.18	0.30	0.	0.
R	0.	0.	0.	0.	0.	0.	0.	0.23	0.	0.
110 A	0.	0.	0.	0.	0.	0.	0.15	0.47	0.	0.
L	0.	0.	0.	0.	0.	0.	0.15	0.82	0.	0.
R	0.	0.	0.	0.	0.	0.	0.	0.18	0.	0.
120 A	0.	0.	0.	0.	0.	0.	0.20	0.76	0.	0.
L	0.	0.	0.	0.	0.	0.	0.20	0.85	0.	0.

RADIANCE VALUES ARE IN MICROWATTS. VA AND SA ARE IN DEGREES.

FIGURE 187 CONT.

IR MEAN RADIANCE AS A FUNCTION OF SUN AZIMUTH

FILTER 1 AT 1240 AST INSOL ANGLE 42.4 DEG
SPECTRAL BAND 2.50 TO 2.80 MICRONS ELEVATION 30.5 KM

VA	0	10	20	30	40	50	60	70	80	90
SA										
R	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
130 A	0.	0.	0.	0.	0.	0.	0.17	1.60	0.	0.
L	0.	0.	0.	0.	0.	0.	0.17	1.60	0.	0.
R	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
140 A	0.	0.	0.	0.	0.	0.	0.16	1.93	0.	0.
L	0.	0.	0.	0.	0.	0.	0.16	1.93	0.	0.
R	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
150 A	0.	0.	0.	0.	0.	0.	0.16	1.95	0.	0.
L	0.	0.	0.	0.	0.	0.	0.16	1.95	0.	0.
R	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
160 A	0.	0.	0.	0.	0.	0.	0.14	1.78	0.	0.
L	0.	0.	0.	0.	0.	0.	0.14	1.78	0.	0.
R	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
170 A	0.	0.	0.	0.	0.	0.	0.16	0.81	0.	0.
L	0.	0.	0.	0.	0.	0.	0.16	0.81	0.	0.
R	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
180 A	0.	0.	0.	0.	0.	0.	0.18	0.47	0.	0.
L	0.	0.	0.	0.	0.	0.	0.18	0.47	0.	0.

RADIANCE VALUES ARE IN MICROWATTS. VA AND SA ARE IN DEGREES.

FIGURE 187 CONT.

IR RMS FLUCTUATION AS A FUNCTION OF SUN AZIMUTH

FILTER 1 AT 1240 AST INSOL ANGLE 42.4 DEG
SPECTRAL BAND 2.50 TO 2.80 MICRONS ELEVATION 30.5 KM

VA	0	10	20	30	40	50	60	70	80	90
SA										
R	0.	0.	0.	0.	0.	0.	0.	0.12	0.	0.
0 A	0.	0.	0.	0.	0.	0.	0.	0.24	0.	0.
L	0.	0.	0.	0.	0.	0.	0.	0.21	0.	0.
R	0.	0.	0.	0.	0.	0.	0.	0.13	0.	0.
10 A	0.	0.	0.	0.	0.	0.	0.	0.35	0.	0.
L	0.	0.	0.	0.	0.	0.	0.	0.32	0.	0.
R	0.	0.	0.	0.	0.	0.	0.	0.19	0.	0.
20 A	0.	0.	0.	0.	0.	0.	0.	0.53	0.	0.
L	0.	0.	0.	0.	0.	0.	0.	0.49	0.	0.
R	0.	0.	0.	0.	0.	0.	0.	0.26	0.	0.
30 A	0.	0.	0.	0.	0.	0.	0.	0.42	0.	0.
L	0.	0.	0.	0.	0.	0.	0.	0.33	0.	0.
R	0.	0.	0.	0.	0.	0.	0.	0.22	0.	0.
40 A	0.	0.	0.	0.12	0.	0.	0.	0.30	0.	0.
L	0.	0.	0.	0.12	0.	0.	0.	0.20	0.	0.
R	0.	0.	0.	0.	0.	0.	0.	0.20	0.	0.
50 A	0.	0.	0.	0.11	0.	0.	0.	0.28	0.	0.
L	0.	0.	0.	0.11	0.	0.	0.	0.19	0.	0.
R	0.	0.	0.	0.	0.	0.	0.	0.25	0.	0.
60 A	0.	0.	0.	0.10	0.	0.	0.13	0.28	0.	0.
L	0.	0.	0.	0.10	0.	0.	0.13	0.12	0.	0.

RADIANCE VALUES ARE IN MICROWATTS. VA AND SA ARE IN DEGREES.

FIGURE 188

IR RMS FLUCTUATION AS A FUNCTION OF SUN AZIMUTH

FILTER 1 AT 1240 AST INSOL ANGLE 42.4 DEG
SPECTRAL BAND 2.50 TO 2.80 MICRONS ELEVATION 30.5 KM

VA	0	10	20	30	40	50	60	70	80	90
SA										
R	0.	0.	0.	0.	0.	0.	0.	0.25	0.	0.
70 A	0.	0.	0.	0.15	0.	0.	0.13	0.29	0.	0.
L	0.	0.	0.	0.15	0.	0.	0.13	0.15	0.	0.
R	0.	0.	0.	0.	0.	0.	0.	0.20	0.	0.
80 A	0.	0.	0.	0.13	0.	0.	0.14	0.24	0.	0.
L	0.	0.	0.	0.13	0.	0.	0.14	0.13	0.	0.
R	0.	0.	0.	0.	0.	0.	0.	0.18	0.	0.
90 A	0.	0.	0.	0.	0.	0.	0.15	0.23	0.	0.
L	0.	0.	0.	0.	0.	0.	0.15	0.15	0.	0.
R	0.	0.	0.	0.	0.	0.	0.	0.16	0.	0.
100 A	0.	0.	0.	0.	0.	0.	0.14	0.26	0.	0.
L	0.	0.	0.	0.	0.	0.	0.14	0.20	0.	0.
R	0.	0.	0.	0.	0.	0.	0.	0.17	0.	0.
110 A	0.	0.	0.	0.	0.	0.	0.13	0.39	0.	0.
L	0.	0.	0.	0.	0.	0.	0.13	0.35	0.	0.
R	0.	0.	0.	0.	0.	0.	0.	0.13	0.	0.
120 A	0.	0.	0.	0.	0.	0.	0.16	0.43	0.	0.
L	0.	0.	0.	0.	0.	0.	0.16	0.41	0.	0.

RADIANCE VALUES ARE IN MICROWATTS. VA AND SA ARE IN DEGREES.

FIGURE 188 CONT.

IR RMS FLUCTUATION AS A FUNCTION OF SUN AZIMUTH

FILTER 1 AT 1240 AST INSOL ANGLE 42.4 DEG
SPECTRAL BAND 2.50 TO 2.80 MICRONS ELEVATION 30.5 KM

VA	0	10	20	30	40	50	60	70	80	90
SA										
R	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
130 A	0.	0.	0.	0.	0.	0.	0.12	0.46	0.	0.
L	0.	0.	0.	0.	0.	0.	0.12	0.46	0.	0.
R	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
140 A	0.	0.	0.	0.	0.	0.	0.12	0.37	0.	0.
L	0.	0.	0.	0.	0.	0.	0.12	0.37	0.	0.
R	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
150 A	0.	0.	0.	0.	0.	0.	0.11	0.43	0.	0.
L	0.	0.	0.	0.	0.	0.	0.11	0.43	0.	0.
R	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
160 A	0.	0.	0.	0.	0.	0.	0.11	0.61	0.	0.
L	0.	0.	0.	0.	0.	0.	0.11	0.61	0.	0.
R	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
170 A	0.	0.	0.	0.	0.	0.	0.12	0.45	0.	0.
L	0.	0.	0.	0.	0.	0.	0.12	0.45	0.	0.
R	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
180 A	0.	0.	0.	0.	0.	0.	0.13	0.22	0.	0.
L	0.	0.	0.	0.	0.	0.	0.13	0.22	0.	0.

RADIANCE VALUES ARE IN MICROWATTS. VA AND SA ARE IN DEGREES.

FIGURE 188 CONT.

IR NUMBER OF OBSERVATIONS AS A FUNCTION OF SCATTERING ANGLE

FILTER 1 AT 1240 AST INSOL ANGLE 42.4 DEG
 SPECTRAL BAND 2.50 TO 2.80 MICRONS ELEVATION 30.5 KM

SA	VA	0	10	20	30	40	50	60	70	80	90
0		0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
10		0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
20		0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
30		0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
40		0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
50		0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
60		0.	0.	0.	0.	0.	0.	0.	435.	0.	0.
70		0.	0.	0.	0.	0.	0.	0.	1140.	0.	0.
80		0.	0.	0.	0.	0.	0.	0.	735.	0.	0.
90		0.	0.	0.	0.	0.	0.	15.	660.	0.	0.
100		0.	0.	0.	0.	0.	0.	375.	555.	0.	0.
110		0.	0.	0.	45.	0.	0.	330.	600.	0.	0.
120		0.	0.	0.	615.	0.	0.	315.	390.	0.	0.
130		0.	0.	0.	45.	0.	0.	285.	270.	0.	0.
140		0.	0.	0.	0.	0.	0.	315.	345.	0.	0.
150		0.	0.	0.	0.	0.	0.	330.	434.	0.	0.
160		0.	0.	0.	0.	0.	0.	404.	0.	0.	0.
170		0.	0.	0.	0.	0.	0.	30.	0.	0.	0.
180		0.	0.	0.	0.	0.	0.	0.	0.	0.	0.

RADIANCE VALUES ARE IN MICROWATTS. VA AND SA ARE IN DEGREES.

FIGURE 189

IR MEAN RADIANCE AS A FUNCTION OF SCATTERING ANGLE

FILTER 1 AT 1240 AST INSOL ANGLE 42.4 DEG
SPECTRAL BAND 2.50 TO 2.80 MICRONS ELEVATION 30.5 KM

VA	0	10	20	30	40	50	60	70	80	90
SA										
0	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
10	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
20	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
30	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
40	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
50	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
60	0.	0.	0.	0.	0.	0.	0.	0.30	0.	0.
70	0.	0.	0.	0.	0.	0.	0.	0.83	0.	0.
80	0.	0.	0.	0.	0.	0.	0.	0.38	0.	0.
90	0.	0.	0.	0.	0.	0.	0.22	0.36	0.	0.
100	0.	0.	0.	0.	0.	0.	0.19	0.24	0.	0.
110	0.	0.	0.	0.15	0.	0.	0.20	0.27	0.	0.
120	0.	0.	0.	0.17	0.	0.	0.18	0.68	0.	0.
130	0.	0.	0.	0.17	0.	0.	0.18	1.33	0.	0.
140	0.	0.	0.	0.	0.	0.	0.17	1.93	0.	0.
150	0.	0.	0.	0.	0.	0.	0.16	1.16	0.	0.
160	0.	0.	0.	0.	0.	0.	0.16	0.	0.	0.
170	0.	0.	0.	0.	0.	0.	0.18	0.	0.	0.
180	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.

RADIANCE VALUES ARE IN MICROWATTS. VA AND SA ARE IN DEGREES.

FIGURE 190

IR RMS FLUCTUATION AS A FUNCTION OF SCATTERING ANGLE

FILTER 1 AT 1240 AST INSQL ANGLE 42.4 DEG
SPECTRAL BAND 2.50 TO 2.80 MICRONS ELEVATION 30.5 KM

SA	VA	0	10	20	30	40	50	60	70	80	90
0	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
10	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
20	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
30	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
40	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
50	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
60	0.	0.	0.	0.	0.	0.	0.	0.	0.26	0.	0.
70	0.	0.	0.	0.	0.	0.	0.	0.	0.70	0.	0.
80	0.	0.	0.	0.	0.	0.	0.	0.	0.25	0.	0.
90	0.	0.	0.	0.	0.	0.	0.	0.16	0.30	0.	0.
100	0.	0.	0.	0.	0.	0.	0.	0.13	0.17	0.	0.
110	0.	0.	0.	0.13	0.	0.	0.	0.15	0.20	0.	0.
120	0.	0.	0.	0.12	0.	0.	0.	0.14	0.48	0.	0.
130	0.	0.	0.	0.12	0.	0.	0.	0.15	0.66	0.	0.
140	0.	0.	0.	0.	0.	0.	0.	0.12	0.40	0.	0.
150	0.	0.	0.	0.	0.	0.	0.	0.12	0.74	0.	0.
160	0.	0.	0.	0.	0.	0.	0.	0.12	0.	0.	0.
170	0.	0.	0.	0.	0.	0.	0.	0.15	0.	0.	0.
180	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.

RADIANCE VALUES ARE IN MICROWATTS. VA AND SA ARE IN DEGREES.

FIGURE 191

IR NUMBER OF OBSERVATIONS AS A FUNCTION OF SUN AZIMUTH

FILTER 10 AT 1249 AST INSOL ANGLE 42.7 DEG
SPECTRAL BAND 3.95 TO 4.80 MICRONS ELEVATION 30.5 KM

VA SA	0	10	20	30	40	50	60	70	80	90
R	0.	0.	0.	90.	0.	0.	105.	120.	0.	0.
0 A	0.	0.	0.	98.	0.	0.	105.	90.	0.	0.
L	0.	0.	0.	105.	0.	0.	105.	60.	0.	0.
R	0.	0.	0.	210.	0.	0.	195.	150.	0.	0.
10 A	0.	0.	0.	217.	0.	0.	195.	165.	0.	0.
L	0.	0.	0.	223.	0.	0.	195.	180.	0.	0.
R	0.	0.	0.	225.	0.	0.	149.	195.	0.	0.
20 A	0.	0.	0.	225.	0.	0.	180.	173.	0.	0.
L	0.	0.	0.	225.	0.	0.	210.	150.	0.	0.
R	0.	0.	0.	195.	0.	0.	195.	150.	0.	0.
30 A	0.	0.	0.	128.	0.	0.	158.	134.	0.	0.
L	0.	0.	0.	60.	0.	0.	120.	118.	0.	0.
R	0.	0.	0.	195.	0.	0.	180.	165.	0.	0.
40 A	0.	0.	0.	98.	0.	15.	90.	165.	0.	0.
L	0.	0.	0.	0.	0.	30.	0.	165.	0.	0.
R	0.	0.	0.	210.	0.	0.	240.	165.	0.	0.
50 A	0.	0.	0.	105.	0.	98.	120.	173.	0.	0.
L	0.	0.	0.	0.	0.	195.	0.	180.	0.	0.
R	0.	0.	0.	135.	0.	0.	210.	180.	0.	0.
60 A	0.	0.	0.	68.	0.	83.	105.	180.	0.	0.
L	0.	0.	0.	0.	0.	165.	0.	180.	0.	0.

RADIANCE VALUES ARE IN MICROWATTS. VA AND SA ARE IN DEGREES.

FIGURE 192

IR NUMBER OF OBSERVATIONS AS A FUNCTION OF SUN AZIMUTH

FILTER 10 AT 1249 AST INSOL ANGLE 42.7 DEG
SPECTRAL BAND 3.95 TO 4.80 MICRONS ELEVATION 30.5 KM

VA	0	10	20	30	40	50	60	70	80	90
SA										
R	0.	0.	0.	195.	0.	0.	180.	165.	0.	0.
70 A	0.	0.	0.	98.	0.	75.	90.	180.	0.	0.
L	0.	0.	0.	0.	0.	150.	0.	195.	0.	0.
R	0.	0.	0.	195.	0.	0.	210.	180.	0.	0.
80 A	0.	0.	0.	98.	0.	90.	105.	188.	0.	0.
L	0.	0.	0.	0.	0.	180.	0.	195.	0.	0.
R	0.	0.	0.	210.	0.	0.	225.	180.	0.	0.
90 A	0.	0.	0.	105.	0.	90.	113.	195.	0.	0.
L	0.	0.	0.	0.	0.	180.	0.	210.	0.	0.
R	0.	0.	0.	195.	0.	0.	195.	150.	0.	0.
100 A	0.	0.	0.	98.	0.	75.	98.	173.	0.	0.
L	0.	0.	0.	0.	0.	150.	0.	195.	0.	0.
R	0.	0.	0.	165.	0.	0.	165.	165.	0.	0.
110 A	0.	0.	0.	83.	0.	83.	83.	173.	0.	0.
L	0.	0.	0.	0.	0.	165.	0.	180.	0.	0.
R	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
120 A	0.	0.	0.	0.	0.	105.	0.	90.	0.	0.
L	0.	0.	0.	0.	0.	210.	0.	180.	0.	0.

RADIANCE VALUES ARE IN MICROWATTS. VA AND SA ARE IN DEGREES.

FIGURE 192 CONT.

IR NUMBER OF OBSERVATIONS AS A FUNCTION OF SUN AZIMUTH

FILTER 10 AT 1249 AST INSOL ANGLE 42.7 DEG
SPECTRAL BAND 3.95 TO 4.80 MICRONS ELEVATION 30.5 KM

	VA	0	10	20	30	40	50	60	70	80	90
SA											
	R	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
130	A	0.	0.	0.	0.	0.	98.	0.	90.	0.	0.
	L	0.	0.	0.	0.	0.	195.	0.	179.	0.	0.
	R	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
140	A	0.	0.	0.	0.	0.	97.	0.	105.	0.	0.
	L	0.	0.	0.	0.	0.	194.	0.	210.	0.	0.
	R	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
150	A	0.	0.	0.	0.	0.	120.	0.	60.	0.	0.
	L	0.	0.	0.	0.	0.	240.	0.	120.	0.	0.
	R	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
160	A	0.	0.	0.	0.	0.	105.	0.	0.	0.	0.
	L	0.	0.	0.	0.	0.	210.	0.	0.	0.	0.
	R	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
170	A	0.	0.	0.	0.	0.	90.	0.	0.	0.	0.
	L	0.	0.	0.	0.	0.	180.	0.	0.	0.	0.
	R	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
180	A	0.	0.	0.	0.	0.	60.	0.	0.	0.	0.
	L	0.	0.	0.	0.	0.	120.	0.	0.	0.	0.

RADIANCE VALUES ARE IN MICROWATTS. VA AND SA ARE IN DEGREES.

FIGURE 192 CONT.

IR MEAN RADIANCE AS A FUNCTION OF SUN AZIMUTH

FILTER 10 AT 1249 AST INSOL ANGLE 42.7 DEG
SPECTRAL BAND 3.95 TO 4.80 MICRONS ELEVATION 30.5 KM

VA	0	10	20	30	40	50	60	70	80	90
SA										
R	0.	0.	0.	15.19	0.	0.	10.57	14.49	0.	0.
0 A	0.	0.	0.	14.22	0.	0.	10.85	14.50	0.	0.
L	0.	0.	0.	13.39	0.	0.	11.12	14.50	0.	0.
R	0.	0.	0.	13.05	0.	0.	11.37	14.25	0.	0.
10 A	0.	0.	0.	14.20	0.	0.	11.10	14.42	0.	0.
L	0.	0.	0.	15.28	0.	0.	10.82	14.56	0.	0.
R	0.	0.	0.	14.71	0.	0.	10.82	14.63	0.	0.
20 A	0.	0.	0.	15.67	0.	0.	10.74	14.47	0.	0.
L	0.	0.	0.	16.63	0.	0.	10.68	14.26	0.	0.
R	0.	0.	0.	15.64	0.	0.	11.00	15.23	0.	0.
30 A	0.	0.	0.	16.40	0.	0.	10.85	14.92	0.	0.
L	0.	0.	0.	18.86	0.	0.	10.61	14.53	0.	0.
R	0.	0.	0.	16.35	0.	0.	11.26	14.45	0.	0.
40 A	0.	0.	0.	16.35	0.	16.15	11.26	13.90	0.	0.
L	0.	0.	0.	0.	0.	16.15	0.	13.36	0.	0.
R	0.	0.	0.	16.64	0.	0.	10.99	14.29	0.	0.
50 A	0.	0.	0.	16.64	0.	15.15	10.99	13.43	0.	0.
L	0.	0.	0.	0.	0.	15.15	0.	12.64	0.	0.
R	0.	0.	0.	15.74	0.	0.	11.07	14.74	0.	0.
60 A	0.	0.	0.	15.74	0.	15.09	11.07	13.77	0.	0.
L	0.	0.	0.	0.	0.	15.09	0.	12.80	0.	0.

RADIANCE VALUES ARE IN MICROWATTS. VA AND SA ARE IN DEGREES.

FIGURE 193

IR MEAN RADIANCE AS A FUNCTION OF SUN AZIMUTH

FILTER 10 AT 1249 AST INSOL ANGLE 42.7 DEG
SPECTRAL BAND 3.95 TO 4.80 MICRONS ELEVATION 30.5 KM

VA	0	10	20	30	40	50	60	70	80	90
SA										
R	0.	0.	0.	17.92	0.	0.	11.82	14.76	0.	0.
70 A	0.	0.	0.	17.92	0.	15.40	11.82	13.87	0.	0.
L	0.	0.	0.	0.	0.	15.40	0.	13.12	0.	0.
R	0.	0.	0.	19.53	0.	0.	11.03	14.97	0.	0.
80 A	0.	0.	0.	19.53	0.	14.77	11.03	14.30	0.	0.
L	0.	0.	0.	0.	0.	14.77	0.	13.69	0.	0.
R	0.	0.	0.	19.00	0.	0.	10.72	14.79	0.	0.
90 A	0.	0.	0.	19.00	0.	12.91	10.72	14.16	0.	0.
L	0.	0.	0.	0.	0.	12.91	0.	13.62	0.	0.
R	0.	0.	0.	14.27	0.	0.	10.77	15.04	0.	0.
100 A	0.	0.	0.	14.27	0.	13.21	10.77	14.96	0.	0.
L	0.	0.	0.	0.	0.	13.21	0.	14.91	0.	0.
R	0.	0.	0.	18.93	0.	0.	10.93	15.71	0.	0.
110 A	0.	0.	0.	18.93	0.	12.82	10.93	15.65	0.	0.
L	0.	0.	0.	0.	0.	12.82	0.	15.59	0.	0.
R	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
120 A	0.	0.	0.	0.	0.	14.10	0.	15.44	0.	0.
L	0.	0.	0.	0.	0.	14.10	0.	15.44	0.	0.

RADIANCE VALUES ARE IN MICROWATTS. VA AND SA ARE IN DEGREES.

FIGURE 193 CONT.

IR MEAN RADIANCE AS A FUNCTION OF SUN AZIMUTH

FILTER 10 AT 1249 AST INSOL ANGLE 42.7 DEG
SPECTRAL BAND 3.95 TO 4.80 MICRONS ELEVATION 30.5 KM

VA	0	10	20	30	40	50	60	70	80	90
SA										
R	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
130 A	0.	0.	0.	0.	0.	13.32	0.	15.62	0.	0.
L	0.	0.	0.	0.	0.	13.32	0.	15.62	0.	0.
R	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
140 A	0.	0.	0.	0.	0.	12.22	0.	16.04	0.	0.
L	0.	0.	0.	0.	0.	12.22	0.	16.04	0.	0.
R	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
150 A	0.	0.	0.	0.	0.	13.93	0.	16.36	0.	0.
L	0.	0.	0.	0.	0.	13.93	0.	16.36	0.	0.
R	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
160 A	0.	0.	0.	0.	0.	15.40	0.	0.	0.	0.
L	0.	0.	0.	0.	0.	15.40	0.	0.	0.	0.
R	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
170 A	0.	0.	0.	0.	0.	12.29	0.	0.	0.	0.
L	0.	0.	0.	0.	0.	12.29	0.	0.	0.	0.
R	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
180 A	0.	0.	0.	0.	0.	12.58	0.	0.	0.	0.
L	0.	0.	0.	0.	0.	12.58	0.	0.	0.	0.

RADIANCE VALUES ARE IN MICROWATTS. VA AND SA ARE IN DEGREES.

FIGURE 193 CONT.

IR RMS FLUCTUATION AS A FUNCTION OF SUN AZIMUTH

FILTER 10 AT 1249 AST INSOL ANGLE 42.7 DEG
SPECTRAL BAND 3.95 TO 4.80 MICRONS ELEVATION 30.5 KM

VA	0	10	20	30	40	50	60	70	80	90
SA										
R	0.	0.	0.	0.90	0.	0.	1.02	0.96	0.	0.
0 A	0.	0.	0.	1.50	0.	0.	1.59	1.34	0.	0.
L	0.	0.	0.	1.20	0.	0.	1.21	0.93	0.	0.
R	0.	0.	0.	1.36	0.	0.	1.30	1.05	0.	0.
10 A	0.	0.	0.	2.18	0.	0.	1.68	1.45	0.	0.
L	0.	0.	0.	1.70	0.	0.	1.07	0.99	0.	0.
R	0.	0.	0.	0.99	0.	0.	1.12	1.02	0.	0.
20 A	0.	0.	0.	1.80	0.	0.	1.51	1.38	0.	0.
L	0.	0.	0.	1.50	0.	0.	1.02	0.93	0.	0.
R	0.	0.	0.	1.02	0.	0.	1.25	0.95	0.	0.
30 A	0.	0.	0.	1.62	0.	0.	1.63	2.52	0.	0.
L	0.	0.	0.	1.26	0.	0.	1.05	2.33	0.	0.
R	0.	0.	0.	0.91	0.	0.	1.12	0.99	0.	0.
40 A	0.	0.	0.	0.91	0.	1.38	1.12	1.56	0.	0.
L	0.	0.	0.	0.	0.	1.38	0.	1.21	0.	0.
R	0.	0.	0.	0.97	0.	0.	1.06	0.94	0.	0.
50 A	0.	0.	0.	0.97	0.	1.55	1.06	1.40	0.	0.
L	0.	0.	0.	0.	0.	1.55	0.	1.03	0.	0.
R	0.	0.	0.	0.96	0.	0.	1.11	0.92	0.	0.
60 A	0.	0.	0.	0.96	0.	1.00	1.11	1.53	0.	0.
L	0.	0.	0.	0.	0.	1.00	0.	1.22	0.	0.

RADIANCE VALUES ARE IN MICROWATTS. VA AND SA ARE IN DEGREES.

FIGURE 194

IR RMS FLUCTUATION AS A FUNCTION OF SUN AZIMUTH

FILTER 10 AT 1249 AST INSOL ANGLE 42.7 DEG
SPECTRAL BAND 3.95 TO 4.80 MICRONS ELEVATION 30.5 KM

VA	0	10	20	30	40	50	60	70	80	90
SA										
R	0.	0.	0.	1.39	0.	0.	1.48	0.94	0.	0.
70 A	0.	0.	0.	1.39	0.	1.01	1.48	1.38	0.	0.
L	0.	0.	0.	0.	0.	1.01	0.	1.01	0.	0.
R	0.	0.	0.	0.98	0.	0.	1.14	0.95	0.	0.
80 A	0.	0.	0.	0.98	0.	1.07	1.14	1.40	0.	0.
L	0.	0.	0.	0.	0.	1.07	0.	1.03	0.	0.
R	0.	0.	0.	1.37	0.	0.	1.04	0.95	0.	0.
90 A	0.	0.	0.	1.37	0.	1.99	1.04	1.38	0.	0.
L	0.	0.	0.	0.	0.	1.99	0.	1.00	0.	0.
R	0.	0.	0.	1.32	0.	0.	1.02	0.96	0.	0.
100 A	0.	0.	0.	1.32	0.	1.93	1.02	1.39	0.	0.
L	0.	0.	0.	0.	0.	1.93	0.	1.01	0.	0.
R	0.	0.	0.	2.20	0.	0.	1.07	0.97	0.	0.
110 A	0.	0.	0.	2.20	0.	1.87	1.07	1.36	0.	0.
L	0.	0.	0.	0.	0.	1.87	0.	0.95	0.	0.
R	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
120 A	0.	0.	0.	0.	0.	1.13	0.	0.92	0.	0.
L	0.	0.	0.	0.	0.	1.13	0.	0.92	0.	0.

RADIANCE VALUES ARE IN MICROWATTS. VA AND SA ARE IN DEGREES.

FIGURE 194 CONT.

IR RMS FLUCTUATION AS A FUNCTION OF SUN AZIMUTH

FILTER 10 AT 1249 AST INSOL ANGLE 42.7 DEG
SPECTRAL BAND 3.95 TO 4.80 MICRONS ELEVATION 30.5 KM

	VA	0	10	20	30	40	50	60	70	80	90
SA											
	R	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
130	A	0.	0.	0.	0.	0.	1.55	0.	0.93	0.	0.
	L	0.	0.	0.	0.	0.	1.55	0.	0.93	0.	0.
	R	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
140	A	0.	0.	0.	0.	0.	1.79	0.	0.91	0.	0.
	L	0.	0.	0.	0.	0.	1.79	0.	0.91	0.	0.
	R	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
150	A	0.	0.	0.	0.	0.	2.29	0.	0.91	0.	0.
	L	0.	0.	0.	0.	0.	2.29	0.	0.91	0.	0.
	R	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
160	A	0.	0.	0.	0.	0.	2.11	0.	0.	0.	0.
	L	0.	0.	0.	0.	0.	2.11	0.	0.	0.	0.
	R	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
170	A	0.	0.	0.	0.	0.	1.90	0.	0.	0.	0.
	L	0.	0.	0.	0.	0.	1.90	0.	0.	0.	0.
	R	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
180	A	0.	0.	0.	0.	0.	1.44	0.	0.	0.	0.
	L	0.	0.	0.	0.	0.	1.44	0.	0.	0.	0.

RADIANCE VALUES ARE IN MICROWATTS. VA AND SA ARE IN DEGREES.

FIGURE 194 CONT.

IR NUMBER OF OBSERVATIONS AS A FUNCTION OF SCATTERING ANGLE

FILTER 10 AT 1249 AST INSOL ANGLE 42.7 DEG
SPECTRAL BAND 3.95 TO 4.80 MICRONS ELEVATION 30.5 KM

SA	VA	0	10	20	30	40	50	60	70	80	90
0		0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
10		0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
20		0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
30		0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
40		0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
50		0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
60		0.	0.	0.	0.	0.	0.	0.	390.	0.	0.
70		0.	0.	0.	0.	0.	0.	0.	928.	0.	0.
80		0.	0.	0.	0.	0.	0.	1304.	645.	0.	0.
90		0.	0.	0.	0.	0.	0.	465.	615.	0.	0.
100		0.	0.	0.	0.	0.	270.	375.	600.	0.	0.
110		0.	0.	0.	1588.	0.	360.	360.	525.	0.	0.
120		0.	0.	0.	540.	0.	315.	285.	405.	0.	0.
130		0.	0.	0.	465.	0.	255.	90.	284.	0.	0.
140		0.	0.	0.	240.	0.	315.	0.	270.	0.	0.
150		0.	0.	0.	0.	0.	284.	0.	0.	0.	0.
160		0.	0.	0.	0.	0.	315.	0.	0.	0.	0.
170		0.	0.	0.	0.	0.	330.	0.	0.	0.	0.
180		0.	0.	0.	0.	0.	120.	0.	0.	0.	0.

RADIANCE VALUES ARE IN MICROWATTS. VA AND SA ARE IN DEGREES.

FIGURE 195

IR MEAN RADIANCE AS A FUNCTION OF SCATTERING ANGLE

FILTER 10 AT 1249 AST INSOL ANGLE 42.7 DEG
 SPECTRAL BAND 3.95 TO 4.80 MICRONS ELEVATION 30.5 KM

SA	VA	0	10	20	30	40	50	60	70	80	90
0	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
10	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
20	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
30	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
40	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
50	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
60	0.	0.	0.	0.	0.	0.	0.	0.	14.56	0.	0.
70	0.	0.	0.	0.	0.	0.	0.	0.	14.54	0.	0.
80	0.	0.	0.	0.	0.	0.	0.	10.92	13.58	0.	0.
90	0.	0.	0.	0.	0.	0.	0.	11.08	13.79	0.	0.
100	0.	0.	0.	0.	0.	0.	15.21	11.35	14.22	0.	0.
110	0.	0.	0.	0.	15.33	0.	15.23	10.88	14.88	0.	0.
120	0.	0.	0.	0.	17.13	0.	13.27	10.80	15.58	0.	0.
130	0.	0.	0.	0.	18.06	0.	13.10	10.97	15.67	0.	0.
140	0.	0.	0.	0.	17.34	0.	14.11	0.	16.21	0.	0.
150	0.	0.	0.	0.	0.	0.	12.19	0.	0.	0.	0.
160	0.	0.	0.	0.	0.	0.	14.77	0.	0.	0.	0.
170	0.	0.	0.	0.	0.	0.	13.23	0.	0.	0.	0.
180	0.	0.	0.	0.	0.	0.	12.58	0.	0.	0.	0.

RADIANCE VALUES ARE IN MICROWATTS. VA AND SA ARE IN DEGREES.

FIGURE 196

IR RMS FLUCTUATION AS A FUNCTION OF SCATTERING ANGLE

FILTER 10 AT 1249 AST INSOL ANGLE 42.7 DEG
SPECTRAL BAND 3.95 TO 4.80 MICRONS ELEVATION 30.5 KM

VA	0	10	20	30	40	50	60	70	80	90
SA										
0	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
10	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
20	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
30	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
40	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
50	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
60	0.	0.	0.	0.	0.	0.	0.	0.98	0.	0.
70	0.	0.	0.	0.	0.	0.	0.	1.29	0.	0.
80	0.	0.	0.	0.	0.	0.	1.18	1.38	0.	0.
90	0.	0.	0.	0.	0.	0.	1.09	1.32	0.	0.
100	0.	0.	0.	0.	0.	1.49	1.38	1.16	0.	0.
110	0.	0.	0.	1.87	0.	1.02	1.10	1.10	0.	0.
120	0.	0.	0.	1.58	0.	1.85	1.05	0.94	0.	0.
130	0.	0.	0.	2.45	0.	2.02	1.05	0.94	0.	0.
140	0.	0.	0.	3.04	0.	1.13	0.	0.91	0.	0.
150	0.	0.	0.	0.	0.	1.58	0.	0.	0.	0.
160	0.	0.	0.	0.	0.	2.70	0.	0.	0.	0.
170	0.	0.	0.	0.	0.	1.87	0.	0.	0.	0.
180	0.	0.	0.	0.	0.	1.44	0.	0.	0.	0.

RADIANCE VALUES ARE IN MICROWATTS. VA AND SA ARE IN DEGREES.

FIGURE 197

IR NUMBER OF OBSERVATIONS AS A FUNCTION OF SUN AZIMUTH

FILTER 9 AT 1254 AST INSOL ANGLE 42.9 DEG
SPECTRAL BAND 4.18 TO 4.97 MICRONS ELEVATION 30.5 KM

VA SA	0	10	20	30	40	50	60	70	80	90
R	0.	0.	0.	105.	0.	0.	0.	75.	0.	0.
0 A	0.	0.	0.	90.	0.	0.	0.	105.	0.	0.
L	0.	0.	0.	75.	0.	0.	0.	135.	0.	0.
R	0.	0.	0.	149.	0.	0.	0.	195.	0.	0.
10 A	0.	0.	0.	157.	0.	0.	0.	188.	0.	0.
L	0.	0.	0.	165.	0.	0.	0.	180.	0.	0.
R	0.	0.	0.	165.	0.	0.	0.	210.	0.	0.
20 A	0.	0.	0.	180.	0.	0.	0.	218.	0.	0.
L	0.	0.	0.	195.	0.	0.	0.	225.	0.	0.
R	0.	0.	0.	165.	0.	0.	0.	210.	0.	0.
30 A	0.	0.	0.	113.	0.	0.	0.	203.	0.	0.
L	0.	0.	0.	60.	0.	0.	0.	195.	0.	0.
R	0.	0.	0.	165.	0.	0.	0.	195.	0.	0.
40 A	0.	0.	0.	83.	0.	0.	0.	135.	0.	0.
L	0.	0.	0.	0.	0.	0.	0.	75.	0.	0.
R	0.	0.	0.	165.	0.	0.	0.	210.	0.	0.
50 A	0.	0.	0.	83.	0.	105.	0.	173.	0.	0.
L	0.	0.	0.	0.	0.	210.	0.	135.	0.	0.
R	0.	0.	0.	165.	0.	0.	0.	210.	0.	0.
60 A	0.	0.	0.	83.	0.	75.	0.	202.	0.	0.
L	0.	0.	0.	0.	0.	150.	0.	194.	0.	0.

RADIANCE VALUES ARE IN MICROWATTS. VA AND SA ARE IN DEGREES.

FIGURE 198

IR NUMBER OF OBSERVATIONS AS A FUNCTION OF SUN AZINUTH

FILTER 9 AT 1254 AST INSOL ANGLE 42.9 DEG
SPECTRAL BAND 4.18 TO 4.97 MICRONS ELEVATION 30.5 KM

VA	0	10	20	30	40	50	60	70	80	90
SA										
R	0.	0.	0.	180.	0.	0.	0.	210.	0.	0.
70 A	0.	0.	0.	90.	8.	98.	0.	178.	0.	0.
L	0.	0.	0.	0.	15.	195.	0.	146.	0.	0.
R	0.	0.	0.	165.	0.	0.	0.	165.	0.	0.
80 A	0.	0.	0.	83.	15.	75.	0.	135.	0.	0.
L	0.	0.	0.	0.	30.	150.	0.	104.	0.	0.
R	0.	0.	0.	180.	0.	0.	0.	194.	0.	0.
90 A	0.	0.	0.	90.	0.	113.	0.	134.	0.	0.
L	0.	0.	0.	0.	0.	225.	0.	67.	0.	0.
R	0.	0.	0.	135.	0.	0.	0.	150.	0.	0.
100 A	0.	0.	0.	68.	15.	83.	0.	75.	0.	0.
L	0.	0.	0.	0.	30.	165.	0.	0.	0.	0.
R	0.	0.	0.	135.	0.	0.	0.	45.	0.	0.
110 A	0.	0.	0.	68.	15.	83.	0.	23.	0.	0.
L	0.	0.	0.	0.	30.	165.	0.	0.	0.	0.
R	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
120 A	0.	0.	0.	0.	8.	90.	0.	0.	0.	0.
L	0.	0.	0.	0.	15.	180.	0.	0.	0.	0.

RADIANCE VALUES ARE IN MICROWATTS. VA AND SA ARE IN DEGREES.

FIGURE 198 CONT.

IR NUMBER OF OBSERVATIONS AS A FUNCTION OF SUN AZIMUTH

FILTER 9 AT 1254 AST INSOL ANGLE 42.9 DEG
SPECTRAL BAND 4.18 TO 4.97 MICRONS ELEVATION 30.5 KM

	VA	0	10	20	30	40	50	60	70	80	90
SA											
	R	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
130	A	0.	0.	0.	0.	8.	105.	0.	0.	0.	0.
	L	0.	0.	0.	0.	15.	210.	0.	0.	0.	0.
	R	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
140	A	0.	0.	0.	0.	23.	74.	0.	0.	0.	0.
	L	0.	0.	0.	0.	45.	147.	0.	0.	0.	0.
	R	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
150	A	0.	0.	0.	0.	8.	83.	0.	0.	0.	0.
	L	0.	0.	0.	0.	15.	165.	0.	0.	0.	0.
	R	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
160	A	0.	0.	0.	0.	0.	112.	0.	0.	0.	0.
	L	0.	0.	0.	0.	0.	224.	0.	0.	0.	0.
	R	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
170	A	0.	0.	0.	0.	0.	105.	0.	68.	0.	0.
	L	0.	0.	0.	0.	0.	210.	0.	135.	0.	0.
	R	0.	0.	0.	0.	0.	45.	0.	90.	0.	0.
180	A	0.	0.	0.	0.	0.	75.	0.	90.	0.	0.
	L	0.	0.	0.	0.	0.	105.	0.	90.	0.	0.

RADIANCE VALUES ARE IN MICROWATTS. VA AND SA ARE IN DEGREES.

FIGURE 198 CONT.

IR MEAN RADIANCE AS A FUNCTION OF SUN AZIMUTH

FILTER 9 AT 1254 AST INSOL ANGLE 42.9 DEG
SPECTRAL BAND 4.18 TO 4.97 MICRONS ELEVATION 30.5 KM

VA	0	10	20	30	40	50	60	70	80	90
SA										
R	0.	0.	0.	28.83	0.	0.	0.	33.53	0.	0.
0 A	0.	0.	0.	28.80	0.	0.	0.	33.52	0.	0.
L	0.	0.	0.	28.76	0.	0.	0.	33.52	0.	0.
R	0.	0.	0.	30.32	0.	0.	0.	33.65	0.	0.
10 A	0.	0.	0.	30.08	0.	0.	0.	33.48	0.	0.
L	0.	0.	0.	29.87	0.	0.	0.	33.28	0.	0.
R	0.	0.	0.	30.39	0.	0.	0.	33.94	0.	0.
20 A	0.	0.	0.	29.93	0.	0.	0.	33.41	0.	0.
L	0.	0.	0.	29.54	0.	0.	0.	32.92	0.	0.
R	0.	0.	0.	30.90	0.	0.	0.	33.88	0.	0.
30 A	0.	0.	0.	31.65	0.	0.	0.	33.61	0.	0.
L	0.	0.	0.	33.70	0.	0.	0.	33.32	0.	0.
R	0.	0.	0.	32.85	0.	0.	0.	33.31	0.	0.
40 A	0.	0.	0.	32.85	0.	0.	0.	33.37	0.	0.
L	0.	0.	0.	0.	0.	0.	0.	33.54	0.	0.
R	0.	0.	0.	32.67	0.	0.	0.	33.43	0.	0.
50 A	0.	0.	0.	32.67	0.	29.35	0.	33.50	0.	0.
L	0.	0.	0.	0.	0.	29.35	0.	33.62	0.	0.
R	0.	0.	0.	29.81	0.	0.	0.	33.86	0.	0.
60 A	0.	0.	0.	29.81	0.	28.98	0.	33.44	0.	0.
L	0.	0.	0.	0.	0.	28.98	0.	32.99	0.	0.

RADIANCE VALUES ARE IN MICROWATTS. VA AND SA ARE IN DEGREES.

FIGURE 199

IR MEAN RADIANCE AS A FUNCTION OF SUN AZIMUTH

FILTER 9 AT 1254 AST INSOL ANGLE 42.9 DEG
SPECTRAL BAND 4.18 TO 4.97 MICRONS ELEVATION 30.5 KM

VA	0	10	20	30	40	50	60	70	80	90
SA										
R	0.	0.	0.	34.63	0.	0.	0.	34.84	0.	0.
70 A	0.	0.	0.	34.63	29.68	29.07	0.	34.22	0.	0.
L	0.	0.	0.	0.	29.68	29.07	0.	33.32	0.	0.
R	0.	0.	0.	32.74	0.	0.	0.	35.08	0.	0.
80 A	0.	0.	0.	32.74	28.90	30.41	0.	34.33	0.	0.
L	0.	0.	0.	0.	28.90	30.41	0.	33.14	0.	0.
R	0.	0.	0.	31.80	0.	0.	0.	35.01	0.	0.
90 A	0.	0.	0.	31.80	0.	29.11	0.	35.01	0.	0.
L	0.	0.	0.	0.	0.	29.11	0.	0.	0.	0.
R	0.	0.	0.	28.84	0.	0.	0.	34.61	0.	0.
100 A	0.	0.	0.	28.84	28.65	29.10	0.	34.61	0.	0.
L	0.	0.	0.	0.	28.65	29.10	0.	0.	0.	0.
R	0.	0.	0.	30.80	0.	0.	0.	34.43	0.	0.
110 A	0.	0.	0.	30.80	29.24	29.12	0.	34.43	0.	0.
L	0.	0.	0.	0.	29.24	29.12	0.	0.	0.	0.
R	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
120 A	0.	0.	0.	0.	28.72	28.86	0.	0.	0.	0.
L	0.	0.	0.	0.	28.72	28.86	0.	0.	0.	0.

RADIANCE VALUES ARE IN MICROWATTS. VA AND SA ARE IN DEGREES.

FIGURE 199 CONT.

IR MEAN RADIANCE AS A FUNCTION OF SUN AZIMUTH

FILTER 9 AT 1254 AST INSOL ANGLE 42.9 DEG
SPECTRAL BAND 4.18 TO 4.97 MICRONS ELEVATION 30.5 KM

	VA	0	10	20	30	40	50	60	70	80	90
SA											
R	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
130 A	0.	0.	0.	0.	27.96	28.31	0.	0.	0.	0.	0.
L	0.	0.	0.	0.	27.96	28.31	0.	0.	0.	0.	0.
R	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
140 A	0.	0.	0.	0.	28.29	28.32	0.	0.	0.	0.	0.
L	0.	0.	0.	0.	28.29	28.32	0.	0.	0.	0.	0.
R	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
150 A	0.	0.	0.	0.	28.20	28.49	0.	0.	0.	0.	0.
L	0.	0.	0.	0.	28.20	28.49	0.	0.	0.	0.	0.
R	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
160 A	0.	0.	0.	0.	0.	28.04	0.	0.	0.	0.	0.
L	0.	0.	0.	0.	0.	28.04	0.	0.	0.	0.	0.
R	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
170 A	0.	0.	0.	0.	0.	28.76	0.	32.89	0.	0.	0.
L	0.	0.	0.	0.	0.	28.76	0.	32.89	0.	0.	0.
R	0.	0.	0.	0.	0.	28.32	0.	33.23	0.	0.	0.
180 A	0.	0.	0.	0.	0.	27.91	0.	33.11	0.	0.	0.
L	0.	0.	0.	0.	0.	27.74	0.	32.99	0.	0.	0.

RADIANCE VALUES ARE IN MICROWATTS. VA AND SA ARE IN DEGREES.

FIGURE 199 CONT.

IR RMS FLUCTUATION AS A FUNCTION OF SUN AZIMUTH

FILTER 9 AT 1254 AST INSOL ANGLE 42.9 DEG
SPECTRAL BAND 4.18 TO 4.97 MICRONS ELEVATION 30.5 KM

VA	0	10	20	30	40	50	60	70	80	90
SA										
R	0.	0.	0.	1.18	0.	0.	0.	0.90	0.	0.
0 A	0.	0.	0.	1.74	0.	0.	0.	1.27	0.	0.
L	0.	0.	0.	1.28	0.	0.	0.	0.90	0.	0.
R	0.	0.	0.	1.16	0.	0.	0.	0.88	0.	0.
10 A	0.	0.	0.	2.02	0.	0.	0.	1.28	0.	0.
L	0.	0.	0.	1.65	0.	0.	0.	0.93	0.	0.
R	0.	0.	0.	1.34	0.	0.	0.	0.89	0.	0.
20 A	0.	0.	0.	2.27	0.	0.	0.	1.29	0.	0.
L	0.	0.	0.	1.83	0.	0.	0.	0.93	0.	0.
R	0.	0.	0.	1.28	0.	0.	0.	0.88	0.	0.
30 A	0.	0.	0.	1.57	0.	0.	0.	1.30	0.	0.
L	0.	0.	0.	0.91	0.	0.	0.	0.95	0.	0.
R	0.	0.	0.	1.24	0.	0.	0.	0.91	0.	0.
40 A	0.	0.	0.	1.24	0.	0.	0.	1.30	0.	0.
L	0.	0.	0.	0.	0.	0.	0.	0.92	0.	0.
R	0.	0.	0.	2.05	0.	0.	0.	0.88	0.	0.
50 A	0.	0.	0.	2.05	0.	1.72	0.	1.37	0.	0.
L	0.	0.	0.	0.	0.	1.72	0.	1.05	0.	0.
R	0.	0.	0.	1.45	0.	0.	0.	0.93	0.	0.
60 A	0.	0.	0.	1.45	0.	1.60	0.	1.33	0.	0.
L	0.	0.	0.	0.	0.	1.60	0.	0.95	0.	0.

RADIANCE VALUES ARE IN MICROWATTS. VA AND SA ARE IN DEGREES.

IR RMS FLUCTUATION AS A FUNCTION OF SUN AZIMUTH

FILTER 9 AT 1254 AST INSOL ANGLE 42.9 DEG
SPECTRAL BAND 4.18 TO 4.97 MICRONS ELEVATION 30.5 KM

VA	0	10	20	30	40	50	60	70	80	90
SA										
R	0.	0.	0.	2.46	0.	0.	0.	0.89	0.	0.
70 A	0.	0.	0.	2.46	0.96	1.21	0.	1.26	0.	0.
L	0.	0.	0.	0.	0.96	1.21	0.	0.89	0.	0.
R	0.	0.	0.	1.62	0.	0.	0.	0.86	0.	0.
80 A	0.	0.	0.	1.62	1.12	1.22	0.	1.23	0.	0.
L	0.	0.	0.	0.	1.12	1.22	0.	0.87	0.	0.
R	0.	0.	0.	1.85	0.	0.	0.	0.88	0.	0.
90 A	0.	0.	0.	1.85	0.	1.14	0.	0.88	0.	0.
L	0.	0.	0.	0.	0.	1.14	0.	0.	0.	0.
R	0.	0.	0.	1.20	0.	0.	0.	0.95	0.	0.
100 A	0.	0.	0.	1.20	1.08	1.11	0.	0.95	0.	0.
L	0.	0.	0.	0.	1.08	1.11	0.	0.	0.	0.
R	0.	0.	0.	1.10	0.	0.	0.	0.90	0.	0.
110 A	0.	0.	0.	1.10	0.99	1.09	0.	0.90	0.	0.
L	0.	0.	0.	0.	0.99	1.09	0.	0.	0.	0.
R	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
120 A	0.	0.	0.	0.	0.90	1.04	0.	0.	0.	0.
L	0.	0.	0.	0.	0.90	1.04	0.	0.	0.	0.

RADIANCE VALUES ARE IN MICROWATTS. VA AND SA ARE IN DEGREES.

FIGURE 200 CONT.

IR RMS FLUCTUATION AS A FUNCTION OF SUN AZIMUTH

FILTER 9 AT 1254 AST INSOL ANGLE 42.9 DEG
SPECTRAL BAND 4.18 TO 4.97 MICRONS ELEVATION 30.5 KM

	VA	0	10	20	30	40	50	60	70	80	90
SA											
	R	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
130	A	0.	0.	0.	0.	0.90	1.15	0.	0.	0.	0.
	L	0.	0.	0.	0.	0.90	1.15	0.	0.	0.	0.
	R	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
140	A	0.	0.	0.	0.	1.19	1.17	0.	0.	0.	0.
	L	0.	0.	0.	0.	1.19	1.17	0.	0.	0.	0.
	R	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
150	A	0.	0.	0.	0.	1.16	1.12	0.	0.	0.	0.
	L	0.	0.	0.	0.	1.16	1.12	0.	0.	0.	0.
	R	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
160	A	0.	0.	0.	0.	0.	1.05	0.	0.	0.	0.
	L	0.	0.	0.	0.	0.	1.05	0.	0.	0.	0.
	R	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
170	A	0.	0.	0.	0.	0.	1.43	0.	0.90	0.	0.
	L	0.	0.	0.	0.	0.	1.43	0.	0.90	0.	0.
	R	0.	0.	0.	0.	0.	0.93	0.	0.96	0.	0.
180	A	0.	0.	0.	0.	0.	1.37	0.	1.36	0.	0.
	L	0.	0.	0.	0.	0.	0.99	0.	0.95	0.	0.

RADIANCE VALUES ARE IN MICROWATTS. VA AND SA ARE IN DEGREES.

FIGURE 200 CONT.

IR NUMBER OF OBSERVATIONS AS A FUNCTION OF SCATTERING ANGLE

FILTER 9 AT 1254 AST INSOL ANGLE 42.9 DEG
SPECTRAL BAND 4.18 TO 4.97 MICRONS ELEVATION 30.5 KM

VA	0	10	20	30	40	50	60	70	80	90
SA										
0	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
10	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
20	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
30	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
40	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
50	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
60	0.	0.	0.	0.	0.	0.	0.	660.	0.	0.
70	0.	0.	0.	0.	0.	0.	0.	1005.	0.	0.
80	0.	0.	0.	0.	0.	0.	0.	615.	0.	0.
90	0.	0.	0.	0.	0.	0.	0.	580.	0.	0.
100	0.	0.	0.	0.	0.	255.	0.	418.	0.	0.
110	0.	0.	0.	1304.	45.	375.	0.	267.	0.	0.
120	0.	0.	0.	480.	0.	345.	0.	0.	0.	0.
130	0.	0.	0.	390.	60.	255.	0.	0.	0.	0.
140	0.	0.	0.	195.	15.	300.	0.	0.	0.	0.
150	0.	0.	0.	0.	60.	237.	0.	315.	0.	0.
160	0.	0.	0.	0.	15.	285.	0.	0.	0.	0.
170	0.	0.	0.	0.	0.	344.	0.	0.	0.	0.
180	0.	0.	0.	0.	0.	150.	0.	0.	0.	0.

RADIANCE VALUES ARE IN MICROWATTS. VA AND SA ARE IN DEGREES.

FIGURE 201

IR MEAN RADIANCE AS A FUNCTION OF SCATTERING ANGLE

FILTER 9 AT 1254 AST INSOL ANGLE 42.9 DEG
SPECTRAL BAND 4.18 TO 4.97 MICRONS ELEVATION 30.5 KM

VA	0	10	20	30	40	50	60	70	80	90
SA										
0	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
10	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
20	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
30	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
40	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
50	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
60	0.	0.	0.	0.	0.	0.	0.	33.46	0.	0.
70	0.	0.	0.	0.	0.	0.	0.	33.49	0.	0.
80	0.	0.	0.	0.	0.	0.	0.	33.53	0.	0.
90	0.	0.	0.	0.	0.	0.	0.	34.04	0.	0.
100	0.	0.	0.	0.	0.	29.22	0.	34.49	0.	0.
110	0.	0.	0.	30.64	29.16	29.22	0.	34.15	0.	0.
120	0.	0.	0.	32.24	0.	29.47	0.	0.	0.	0.
130	0.	0.	0.	31.68	28.94	29.24	0.	0.	0.	0.
140	0.	0.	0.	30.15	28.72	28.75	0.	0.	0.	0.
150	0.	0.	0.	0.	28.21	28.25	0.	33.02	0.	0.
160	0.	0.	0.	0.	28.20	28.32	0.	0.	0.	0.
170	0.	0.	0.	0.	0.	28.48	0.	0.	0.	0.
180	0.	0.	0.	0.	0.	27.91	0.	0.	0.	0.

RADIANCE VALUES ARE IN MICROWATTS. VA AND SA ARE IN DEGREES.

FIGURE 202

IR RMS FLUCTUATION AS A FUNCTION OF SCATTERING ANGLE

FILTER 9 AT 1254 ÅST INSOL ANGLE 42.9 DEG
SPECTRAL BAND 4.18 TO 4.97 MICRONS ELEVATION 30.5 KM

VA	0	10	20	30	40	50	60	70	80	90
SA										
0	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
10	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
20	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
30	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
40	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
50	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
60	0.	0.	0.	0.	0.	0.	0.	0.91	0.	0.
70	0.	0.	0.	0.	0.	0.	0.	1.00	0.	0.
80	0.	0.	0.	0.	0.	0.	0.	0.97	0.	0.
90	0.	0.	0.	0.	0.	0.	0.	1.24	0.	0.
100	0.	0.	0.	0.	0.	1.67	0.	1.21	0.	0.
110	0.	0.	0.	2.02	1.13	1.36	0.	1.16	0.	0.
120	0.	0.	0.	2.91	0.	1.40	0.	0.	0.	0.
130	0.	0.	0.	2.17	1.08	1.07	0.	0.	0.	0.
140	0.	0.	0.	1.53	0.90	1.09	0.	0.	0.	0.
150	0.	0.	0.	0.	1.13	1.16	0.	0.94	0.	0.
160	0.	0.	0.	0.	1.16	1.10	0.	0.	0.	0.
170	0.	0.	0.	0.	0.	1.35	0.	0.	0.	0.
180	0.	0.	0.	0.	0.	1.01	0.	0.	0.	0.

RADIANCE VALUES ARE IN MICROWATTS. VA AND SA ARE IN DEGREES.

FIGURE 203

IR NUMBER OF OBSERVATIONS AS A FUNCTION OF SUN AZIMUTH

FILTER 8 AT 1259 AST INSOL ANGLE 43.0 DEG
SPECTRAL BAND 3.42 TO 4.81 MICRONS ELEVATION 30.5 KM

VA	0	10	20	30	40	50	60	70	80	90
SA										
R	0.	0.	0.	0.	0.	90.	0.	90.	0.	0.
0 A	0.	0.	0.	0.	0.	75.	0.	90.	0.	0.
L	0.	0.	0.	0.	0.	60.	0.	90.	0.	0.
R	0.	0.	0.	0.	0.	165.	0.	150.	0.	0.
10 A	0.	0.	0.	0.	0.	165.	0.	165.	0.	0.
L	0.	0.	0.	0.	0.	165.	0.	180.	0.	0.
R	0.	0.	0.	0.	0.	135.	0.	180.	0.	0.
20 A	0.	0.	0.	0.	0.	143.	0.	180.	0.	0.
L	0.	0.	0.	0.	0.	150.	0.	180.	0.	0.
R	0.	0.	0.	0.	0.	135.	0.	135.	0.	0.
30 A	0.	0.	0.	0.	0.	120.	0.	150.	0.	0.
L	0.	0.	0.	0.	0.	105.	0.	165.	0.	0.
R	0.	0.	0.	0.	0.	135.	0.	165.	0.	0.
40 A	0.	0.	0.	8.	0.	68.	15.	120.	0.	0.
L	0.	0.	0.	15.	0.	0.	30.	75.	0.	0.
R	0.	0.	0.	0.	0.	165.	0.	135.	0.	0.
50 A	0.	0.	0.	60.	0.	83.	83.	180.	0.	0.
L	0.	0.	0.	120.	0.	0.	165.	225.	0.	0.
R	0.	0.	0.	0.	0.	165.	0.	165.	0.	0.
60 A	0.	0.	0.	105.	0.	83.	90.	203.	0.	0.
L	0.	0.	0.	210.	0.	0.	180.	240.	0.	0.

RADIANCE VALUES ARE IN MICROWATTS. VA AND SA ARE IN DEGREES.

FIGURE 204

IR NUMBER OF OBSERVATIONS AS A FUNCTION OF SUN AZIMUTH

FILTER 8 AT 1259 AST INSOL ANGLE 43.0 DEG
SPECTRAL BAND 3.42 TO 4.81 MICRONS ELEVATION 30.5 KM

VA SA	0	10	20	30	40	50	60	70	80	90
R	0.	0.	0.	0.	0.	180.	0.	165.	0.	0.
70 A	0.	0.	0.	98.	0.	90.	68.	158.	0.	0.
L	0.	0.	0.	195.	0.	0.	135.	150.	0.	0.
R	0.	0.	0.	0.	0.	150.	0.	180.	0.	0.
80 A	0.	0.	0.	113.	0.	75.	83.	203.	0.	0.
L	0.	0.	0.	225.	0.	0.	165.	225.	0.	0.
R	0.	0.	0.	0.	0.	180.	0.	150.	0.	0.
90 A	0.	0.	0.	98.	0.	90.	90.	158.	0.	0.
L	0.	0.	0.	195.	0.	0.	180.	165.	0.	0.
R	0.	0.	0.	0.	60.	75.	0.	180.	0.	0.
100 A	0.	0.	0.	98.	30.	38.	75.	173.	0.	0.
L	0.	0.	0.	195.	0.	0.	150.	165.	0.	0.
R	0.	0.	0.	0.	0.	90.	0.	45.	0.	0.
110 A	0.	0.	0.	90.	0.	45.	75.	120.	0.	0.
L	0.	0.	0.	180.	0.	0.	150.	195.	0.	0.
R	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
120 A	0.	0.	0.	105.	0.	0.	83.	105.	0.	0.
L	0.	0.	0.	210.	0.	0.	165.	210.	0.	0.

RADIANCE VALUES ARE IN MICROWATTS. VA AND SA ARE IN DEGREES.

FIGURE 204 CONT.

IR NUMBER OF OBSERVATIONS AS A FUNCTION OF SUN AZIMUTH

FILTER 8 AT 1259 AST INSOL ANGLE 43.0 DEG
SPECTRAL BAND 3.42 TO 4.81 MICRONS ELEVATION 30.5 KM

	VA	0	10	20	30	40	50	60	70	80	90
SA											
R		0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
130 A		0.	0.	0.	90.	0.	0.	68.	105.	0.	0.
L		0.	0.	0.	180.	0.	0.	135.	210.	0.	0.
R		0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
140 A		0.	0.	0.	113.	0.	0.	90.	105.	0.	0.
L		0.	0.	0.	225.	0.	0.	180.	210.	0.	0.
R		0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
150 A		0.	0.	0.	98.	0.	0.	75.	98.	0.	0.
L		0.	0.	0.	195.	0.	0.	150.	195.	0.	0.
R		0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
160 A		0.	0.	0.	120.	0.	0.	105.	113.	0.	0.
L		0.	0.	0.	239.	0.	0.	210.	225.	0.	0.
R		0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
170 A		0.	0.	0.	90.	0.	0.	98.	98.	0.	0.
L		0.	0.	0.	180.	0.	0.	195.	195.	0.	0.
R		0.	0.	0.	60.	0.	0.	60.	105.	0.	0.
180 A		0.	0.	0.	90.	0.	0.	75.	98.	0.	0.
L		0.	0.	0.	120.	0.	0.	90.	90.	0.	0.

RADIANCE VALUES ARE IN MICROWATTS. VA AND SA ARE IN DEGREES.

FIGURE 204 CONT.

IR MEAN RADIANCE AS A FUNCTION OF SUN AZIMUTH

FILTER 8 AT 1259 AST INSOL ANGLE 43.0 DEG
SPECTRAL BAND 3.42 TO 4.81 MICRONS ELEVATION 30.5 KM

VA	0	10	20	30	40	50	60	70	80	90
SA										
R	0.	0.	0.	0.	0.	16.99	0.	18.18	0.	0.
0 A	0.	0.	0.	0.	0.	17.66	0.	18.33	0.	0.
L	0.	0.	0.	0.	0.	18.65	0.	18.48	0.	0.
R	0.	0.	0.	0.	0.	15.74	0.	17.06	0.	0.
10 A	0.	0.	0.	0.	0.	18.26	0.	18.03	0.	0.
L	0.	0.	0.	0.	0.	20.77	0.	18.85	0.	0.
R	0.	0.	0.	0.	0.	17.35	0.	15.84	0.	0.
20 A	0.	0.	0.	0.	0.	19.99	0.	16.19	0.	0.
L	0.	0.	0.	0.	0.	22.37	0.	16.55	0.	0.
R	0.	0.	0.	0.	0.	15.37	0.	16.07	0.	0.
30 A	0.	0.	0.	0.	0.	16.18	0.	17.13	0.	0.
L	0.	0.	0.	0.	0.	17.21	0.	18.00	0.	0.
R	0.	0.	0.	0.	0.	16.21	0.	18.09	0.	0.
40 A	0.	0.	0.	27.80	0.	16.21	22.65	17.49	0.	0.
L	0.	0.	0.	27.80	0.	0.	22.65	16.17	0.	0.
R	0.	0.	0.	0.	0.	23.33	0.	19.63	0.	0.
50 A	0.	0.	0.	25.91	0.	23.33	20.40	19.65	0.	0.
L	0.	0.	0.	25.91	0.	0.	20.40	19.67	0.	0.
R	0.	0.	0.	0.	0.	28.09	0.	20.60	0.	0.
60 A	0.	0.	0.	24.88	0.	28.09	19.48	17.84	0.	0.
L	0.	0.	0.	24.88	0.	0.	19.48	15.94	0.	0.

RADIANCE VALUES ARE IN MICROWATTS. VA AND SA ARE IN DEGREES.

FIGURE 205

IR MEAN RADIANCE AS A FUNCTION OF SUN AZIMUTH

FILTER 8 AT 1259 AST INSOL ANGLE 43.0 DEG
SPECTRAL BAND 3.42 TO 4.81 MICRONS ELEVATION 30.5 KM

VA	0	10	20	30	40	50	60	70	80	90
SA										
R	0.	0.	0.	0.	0.	25.25	0.	20.76	0.	0.
70 A	0.	0.	0.	27.39	0.	25.25	23.88	19.17	0.	0.
L	0.	0.	0.	27.39	0.	0.	23.88	17.43	0.	0.
R	0.	0.	0.	0.	0.	24.49	0.	20.55	0.	0.
80 A	0.	0.	0.	35.84	0.	24.49	20.67	18.40	0.	0.
L	0.	0.	0.	35.84	0.	0.	20.67	16.69	0.	0.
R	0.	0.	0.	0.	0.	23.62	0.	19.90	0.	0.
90 A	0.	0.	0.	34.42	0.	23.62	17.35	18.24	0.	0.
L	0.	0.	0.	34.42	0.	0.	17.35	16.72	0.	0.
R	0.	0.	0.	0.	22.56	19.68	0.	20.49	0.	0.
100 A	0.	0.	0.	32.94	22.56	19.68	20.14	18.31	0.	0.
L	0.	0.	0.	32.94	0.	0.	20.14	15.93	0.	0.
R	0.	0.	0.	0.	0.	19.97	0.	20.49	0.	0.
110 A	0.	0.	0.	32.61	0.	19.97	16.32	17.01	0.	0.
L	0.	0.	0.	32.61	0.	0.	16.32	16.20	0.	0.
R	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
120 A	0.	0.	0.	34.52	0.	0.	18.39	17.81	0.	0.
L	0.	0.	0.	34.52	0.	0.	18.39	17.81	0.	0.

RADIANCE VALUES ARE IN MICROWATTS. VA AND SA ARE IN DEGREES.

FIGURE 205 CONT.

IR MEAN RADIANCE AS A FUNCTION OF SUN AZIMUTH

FILTER 8 AT 1259 AST INSOL ANGLE 43.0 DEG
SPECTRAL BAND 3.42 TO 4.81 MICRONS ELEVATION 30.5 KM

	VA	0	10	20	30	40	50	60	70	80	90
SA											
	R	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
130	A	0.	0.	0.	32.25	0.	0.	18.38	17.20	0.	0.
	L	0.	0.	0.	32.25	0.	0.	18.38	17.20	0.	0.
	R	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
140	A	0.	0.	0.	33.37	0.	0.	18.88	17.71	0.	0.
	L	0.	0.	0.	33.37	0.	0.	18.88	17.71	0.	0.
	R	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
150	A	0.	0.	0.	36.37	0.	0.	19.54	16.43	0.	0.
	L	0.	0.	0.	36.37	0.	0.	19.54	16.43	0.	0.
	R	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
160	A	0.	0.	0.	26.09	0.	0.	21.66	16.43	0.	0.
	L	0.	0.	0.	26.09	0.	0.	21.66	16.43	0.	0.
	R	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
170	A	0.	0.	0.	26.27	0.	0.	21.24	17.53	0.	0.
	L	0.	0.	0.	26.27	0.	0.	21.24	17.53	0.	0.
	R	0.	0.	0.	35.33	0.	0.	18.62	18.03	0.	0.
180	A	0.	0.	0.	33.22	0.	0.	19.37	18.17	0.	0.
	L	0.	0.	0.	32.16	0.	0.	19.88	18.33	0.	0.

RADIANCE VALUES ARE IN MICROWATTS. VA AND SA ARE IN DEGREES.

FIGURE 205 CONT.

IR RMS FLUCTUATION AS A FUNCTION OF SUN AZIMUTH

FILTER 8 AT 1259 AST INSOL ANGLE 43.0 DEG
SPECTRAL BAND 3.42 TO 4.81 MICRONS ELEVATION 30.5 KM

VA	0	10	20	30	40	50	60	70	80	90
SA										
R	0.	0.	0.	0.	0.	0.98	0.	1.15	0.	0.
0 A	0.	0.	0.	0.	0.	1.53	0.	1.57	0.	0.
L	0.	0.	0.	0.	0.	1.18	0.	1.07	0.	0.
R	0.	0.	0.	0.	0.	1.05	0.	1.76	0.	0.
10 A	0.	0.	0.	0.	0.	1.63	0.	2.07	0.	0.
L	0.	0.	0.	0.	0.	1.25	0.	1.09	0.	0.
R	0.	0.	0.	0.	0.	1.10	0.	1.03	0.	0.
20 A	0.	0.	0.	0.	0.	1.87	0.	2.22	0.	0.
L	0.	0.	0.	0.	0.	1.51	0.	1.96	0.	0.
R	0.	0.	0.	0.	0.	1.15	0.	1.12	0.	0.
30 A	0.	0.	0.	0.	0.	2.14	0.	2.17	0.	0.
L	0.	0.	0.	0.	0.	1.81	0.	1.86	0.	0.
R	0.	0.	0.	0.	0.	1.56	0.	1.01	0.	0.
40 A	0.	0.	0.	0.88	0.	1.56	1.03	1.91	0.	0.
L	0.	0.	0.	0.88	0.	0.	1.03	1.62	0.	0.
R	0.	0.	0.	0.	0.	4.30	0.	1.10	0.	0.
50 A	0.	0.	0.	2.15	0.	4.30	3.51	3.06	0.	0.
L	0.	0.	0.	2.15	0.	0.	3.51	2.86	0.	0.
R	0.	0.	0.	0.	0.	1.24	0.	0.90	0.	0.
60 A	0.	0.	0.	1.68	0.	1.24	3.27	1.62	0.	0.
L	0.	0.	0.	1.68	0.	0.	3.27	1.34	0.	0.

RADIANCE VALUES ARE IN MICROWATTS. VA AND SA ARE IN DEGREES.

IR RMS FLUCTUATION AS A FUNCTION OF SUN AZIMUTH

FILTER 8 AT 1259 AST INSOL ANGLE 43.0 DEG
SPECTRAL BAND 3.42 TO 4.81 MICRONS ELEVATION 30.5 KM

VA	0	10	20	30	40	50	60	70	80	90
SA										
R	0.	0.	0.	0.	0.	2.12	0.	0.90	0.	0.
70 A	0.	0.	0.	1.43	0.	2.12	1.89	1.65	0.	0.
L	0.	0.	0.	1.43	0.	0.	1.89	1.39	0.	0.
R	0.	0.	0.	0.	0.	2.60	0.	0.93	0.	0.
80 A	0.	0.	0.	2.04	0.	2.60	1.83	1.57	0.	0.
L	0.	0.	0.	2.04	0.	0.	1.83	1.27	0.	0.
R	0.	0.	0.	0.	0.	2.46	0.	0.95	0.	0.
90 A	0.	0.	0.	0.79	0.	2.46	2.38	1.56	0.	0.
L	0.	0.	0.	0.79	0.	0.	2.38	1.24	0.	0.
R	0.	0.	0.	0.	1.51	1.42	0.	0.91	0.	0.
100 A	0.	0.	0.	1.71	1.51	1.42	2.22	1.56	0.	0.
L	0.	0.	0.	1.71	0.	0.	2.22	1.27	0.	0.
R	0.	0.	0.	0.	0.	1.33	0.	0.97	0.	0.
110 A	0.	0.	0.	3.60	0.	1.33	1.36	1.68	0.	0.
L	0.	0.	0.	3.60	0.	0.	1.36	1.37	0.	0.
R	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
120 A	0.	0.	0.	1.76	0.	0.	1.75	1.51	0.	0.
L	0.	0.	0.	1.76	0.	0.	1.75	1.51	0.	0.

RADIANCE VALUES ARE IN MICROWATTS. VA AND SA ARE IN DEGREES.

FIGURE 206 CONT.

IR RMS FLUCTUATION AS A FUNCTION OF SUN AZIMUTH

FILTER 8 AT 1259 AST						INSOL ANGLE 43.0 DEG				
SPECTRAL BAND 3.42 TO 4.81 MICRONS						ELEVATION 30.5 KM				
VA	0	10	20	30	40	50	60	70	80	90
SA										
R	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
130 A	0.	0.	0.	2.98	0.	0.	1.53	1.11	0.	0.
L	0.	0.	0.	2.98	0.	0.	1.53	1.11	0.	0.
R	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
140 A	0.	0.	0.	3.30	0.	0.	1.55	1.37	0.	0.
L	0.	0.	0.	3.30	0.	0.	1.55	1.37	0.	0.
R	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
150 A	0.	0.	0.	4.06	0.	0.	1.76	1.09	0.	0.
L	0.	0.	0.	4.06	0.	0.	1.76	1.09	0.	0.
R	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
160 A	0.	0.	0.	5.15	0.	0.	1.26	1.19	0.	0.
L	0.	0.	0.	5.15	0.	0.	1.26	1.19	0.	0.
R	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
170 A	0.	0.	0.	5.61	0.	0.	1.24	1.10	0.	0.
L	0.	0.	0.	5.61	0.	0.	1.24	1.10	0.	0.
R	0.	0.	0.	0.30	0.	0.	1.45	1.56	0.	0.
180 A	0.	0.	0.	3.58	0.	0.	1.84	1.90	0.	0.
L	0.	0.	0.	3.56	0.	0.	1.13	1.08	0.	0.

RADIANCE VALUES ARE IN MICROWATTS. VA AND SA ARE IN DEGREES.

FIGURE 206 CONT.

IR NUMBER OF OBSERVATIONS AS A FUNCTION OF SCATTERING ANGLE

FILTER 8 AT 1259 AST INSOL ANGLE 43.0 DEG
SPECTRAL BAND 3.42 TO 4.81 MICRONS ELEVATION 30.5 KM

SA	VA	0	10	20	30	40	50	60	70	80	90
0		0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
10		0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
20		0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
30		0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
40		0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
50		0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
60		0.	0.	0.	0.	0.	0.	0.	555.	0.	0.
70		0.	0.	0.	0.	0.	0.	0.	810.	0.	0.
80		0.	0.	0.	0.	0.	0.	0.	645.	0.	0.
90		0.	0.	0.	0.	0.	960.	210.	600.	0.	0.
100		0.	0.	0.	0.	0.	435.	315.	540.	0.	0.
110		0.	0.	0.	0.	0.	345.	285.	480.	0.	0.
120		0.	0.	0.	555.	0.	300.	225.	270.	0.	0.
130		0.	0.	0.	525.	60.	105.	225.	345.	0.	0.
140		0.	0.	0.	420.	0.	0.	255.	375.	0.	0.
150		0.	0.	0.	450.	0.	0.	225.	615.	0.	0.
160		0.	0.	0.	794.	0.	0.	390.	0.	0.	0.
170		0.	0.	0.	0.	0.	0.	210.	0.	0.	0.
180		0.	0.	0.	0.	0.	0.	0.	0.	0.	0.

RADIANCE VALUES ARE IN MICROWATTS. VA AND SA ARE IN DEGREES.

FIGURE 207

IR MEAN RADIANCE AS A FUNCTION OF SCATTERING ANGLE

FILTER 8 AT 1259 AST INSOL ANGLE 43.0 DEG
SPECTRAL BAND 3.42 TO 4.81 MICRONS ELEVATION 30.5 KM

SA	VA	0	10	20	30	40	50	60	70	80	90
0	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
10	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
20	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
30	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
40	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
50	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
60	0.	0.	0.	0.	0.	0.	0.	0.	17.89	0.	0.
70	0.	0.	0.	0.	0.	0.	0.	0.	16.90	0.	0.
80	0.	0.	0.	0.	0.	0.	0.	0.	19.24	0.	0.
90	0.	0.	0.	0.	0.	0.	18.29	20.41	18.41	0.	0.
100	0.	0.	0.	0.	0.	0.	21.41	21.67	18.35	0.	0.
110	0.	0.	0.	0.	0.	0.	25.95	18.74	18.14	0.	0.
120	0.	0.	0.	0.	26.20	0.	22.43	19.40	16.51	0.	0.
130	0.	0.	0.	0.	35.06	22.56	20.15	17.19	17.49	0.	0.
140	0.	0.	0.	0.	33.03	0.	0.	18.59	17.19	0.	0.
150	0.	0.	0.	0.	33.13	0.	0.	18.97	17.33	0.	0.
160	0.	0.	0.	0.	30.27	0.	0.	21.31	0.	0.	0.
170	0.	0.	0.	0.	0.	0.	0.	20.04	0.	0.	0.
180	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.

RADIANCE VALUES ARE IN MICROWATTS. VA AND SA ARE IN DEGREES.

FIGURE 208

IR RMS FLUCTUATION AS A FUNCTION OF SCATTERING ANGLE

FILTER 8 AT 1259 AST INSOL ANGLE 43.0 DEG
SPECTRAL BAND 3.42 TO 4.81 MICRONS ELEVATION 30.5 KM

SA	VA	0	10	20	30	40	50	60	70	80	90
0	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
10	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
20	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
30	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
40	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
50	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
60	0.	0.	0.	0.	0.	0.	0.	0.	1.68	0.	0.
70	0.	0.	0.	0.	0.	0.	0.	0.	1.77	0.	0.
80	0.	0.	0.	0.	0.	0.	0.	0.	2.41	0.	0.
90	0.	0.	0.	0.	0.	0.	2.77	3.46	2.39	0.	0.
100	0.	0.	0.	0.	0.	0.	5.70	3.32	2.00	0.	0.
110	0.	0.	0.	0.	0.	0.	2.04	2.64	2.53	0.	0.
120	0.	0.	0.	2.10	0.	2.67	2.57	1.32	0.	0.	0.
130	0.	0.	0.	1.44	1.51	1.34	1.94	1.37	0.	0.	0.
140	0.	0.	0.	2.92	0.	0.	1.49	1.38	0.	0.	0.
150	0.	0.	0.	3.15	0.	0.	1.67	1.42	0.	0.	0.
160	0.	0.	0.	6.45	0.	0.	1.32	0.	0.	0.	0.
170	0.	0.	0.	0.	0.	0.	1.67	0.	0.	0.	0.
180	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.

RADIANCE VALUES ARE IN MICROWATTS. VA AND SA ARE IN DEGREES.

FIGURE 209

IR NUMBER OF OBSERVATIONS AS A FUNCTION OF SUN AZIMUTH

FILTER 6 AT 1309 AST INSOL ANGLE 43.4 DEG
SPECTRAL BAND 2.50 TO 2.78 MICRONS ELEVATION 30.5 KM

VA	0	10	20	30	40	50	60	70	80	90
SA										
R	0.	0.	0.	90.	0.	0.	75.	120.	0.	0.
0 A	0.	0.	0.	90.	0.	0.	90.	105.	0.	0.
L	0.	0.	0.	90.	0.	0.	105.	90.	0.	0.
R	0.	0.	0.	135.	0.	0.	165.	210.	0.	0.
10 A	0.	0.	0.	120.	0.	0.	143.	225.	0.	0.
L	0.	0.	0.	105.	0.	0.	120.	240.	0.	0.
R	0.	0.	0.	210.	0.	0.	165.	195.	0.	0.
20 A	0.	0.	0.	105.	0.	0.	105.	113.	0.	0.
L	0.	0.	0.	0.	0.	0.	45.	30.	0.	0.
R	0.	0.	0.	135.	0.	0.	165.	165.	0.	0.
30 A	0.	0.	0.	68.	0.	0.	83.	83.	0.	0.
L	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
R	0.	0.	0.	180.	0.	0.	180.	165.	0.	0.
40 A	0.	0.	0.	90.	0.	0.	90.	83.	0.	0.
L	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
R	0.	0.	0.	135.	0.	0.	148.	180.	0.	0.
50 A	0.	0.	0.	68.	0.	0.	74.	90.	0.	0.
L	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
R	0.	0.	0.	180.	0.	0.	165.	0.	0.	0.
60 A	0.	0.	0.	90.	30.	0.	83.	38.	0.	0.
L	0.	0.	0.	0.	60.	0.	0.	75.	0.	0.

RADIANCE VALUES ARE IN MICROWATTS. VA AND SA ARE IN DEGREES.

FIGURE 210

IR NUMBER OF OBSERVATIONS AS A FUNCTION OF SUN AZIMUTH

FILTER 6 AT 1309 AST INSOL ANGLE 43.4 DEG
SPECTRAL BAND 2.50 TO 2.78 MICRONS ELEVATION 30.5 KM

VA	0	10	20	30	40	50	60	70	80	90
SA										
R	0.	0.	0.	150.	0.	0.	180.	0.	0.	0.
70 A	0.	0.	0.	75.	75.	0.	90.	98.	0.	0.
L	0.	0.	0.	0.	150.	0.	0.	195.	0.	0.
R	0.	0.	0.	90.	0.	0.	150.	0.	0.	0.
80 A	0.	0.	0.	45.	75.	0.	75.	88.	0.	0.
L	0.	0.	0.	0.	150.	0.	0.	176.	0.	0.
R	0.	0.	0.	210.	0.	0.	195.	0.	0.	0.
90 A	0.	0.	0.	105.	82.	0.	98.	60.	0.	0.
L	0.	0.	0.	0.	164.	0.	0.	120.	0.	0.
R	0.	0.	0.	195.	0.	0.	150.	0.	0.	0.
100 A	0.	0.	0.	98.	83.	0.	75.	30.	0.	0.
L	0.	0.	0.	0.	165.	0.	0.	60.	0.	0.
R	0.	0.	0.	195.	0.	0.	165.	0.	0.	0.
110 A	0.	0.	0.	98.	83.	0.	83.	90.	0.	0.
L	0.	0.	0.	0.	165.	0.	0.	180.	0.	0.
R	0.	0.	0.	0.	0.	0.	165.	0.	0.	0.
120 A	0.	0.	0.	0.	98.	0.	83.	90.	0.	0.
L	0.	0.	0.	0.	195.	0.	0.	180.	0.	0.

RADIANCE VALUES ARE IN MICROWATTS. VA AND SA ARE IN DEGREES.

FIGURE 210 CONT.

IR NUMBER OF OBSERVATIONS AS A FUNCTION OF SUN AZIMUTH

FILTER 6 AT 1309 AST INSOL ANGLE 43.4 DEG
SPECTRAL BAND 2.50 TO 2.78 MICRONS ELEVATION 30.5 KM

VA SA	0	10	20	30	40	50	60	70	80	90
R	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
130 A	0.	0.	0.	0.	83.	0.	0.	75.	0.	0.
L	0.	0.	0.	0.	165.	0.	0.	150.	0.	0.
R	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
140 A	0.	0.	0.	0.	75.	0.	0.	90.	0.	0.
L	0.	0.	0.	0.	150.	0.	0.	180.	0.	0.
R	0.	0.	0.	0.	75.	0.	0.	0.	0.	0.
150 A	0.	0.	0.	0.	135.	0.	0.	67.	0.	0.
L	0.	0.	0.	0.	195.	0.	0.	134.	0.	0.
R	0.	0.	0.	0.	180.	0.	0.	225.	0.	0.
160 A	0.	0.	0.	0.	143.	0.	0.	143.	0.	0.
L	0.	0.	0.	0.	105.	0.	0.	60.	0.	0.
R	0.	0.	0.	0.	150.	0.	0.	180.	0.	0.
170 A	0.	0.	0.	0.	158.	0.	0.	170.	0.	0.
L	0.	0.	0.	0.	165.	0.	0.	159.	0.	0.
R	0.	0.	0.	0.	105.	0.	0.	60.	0.	0.
180 A	0.	0.	0.	0.	68.	0.	0.	68.	0.	0.
L	0.	0.	0.	0.	30.	0.	0.	75.	0.	0.

RADIANCE VALUES ARE IN MICROWATTS. VA AND SA ARE IN DEGREES.

FIGURE 210 CONT.

IR MEAN RADIANCE AS A FUNCTION OF SUN AZIMUTH

FILTER 6 AT 1309 AST INSOL ANGLE 43.4 DEG
SPECTRAL BAND 2.50 TO 2.78 MICRONS ELEVATION 30.5 KM

VA	0	10	20	30	40	50	60	70	80	90
SA										
R	0.	0.	0.	0.14	0.	0.	0.19	0.76	0.	0.
0 A	0.	0.	0.	0.15	0.	0.	0.18	0.63	0.	0.
L	0.	0.	0.	0.17	0.	0.	0.17	0.95	0.	0.
R	0.	0.	0.	0.14	0.	0.	0.17	1.44	0.	0.
10 A	0.	0.	0.	0.15	0.	0.	0.17	0.90	0.	0.
L	0.	0.	0.	0.15	0.	0.	0.17	0.44	0.	0.
R	0.	0.	0.	0.15	0.	0.	0.19	2.39	0.	0.
20 A	0.	0.	0.	0.15	0.	0.	0.18	2.16	0.	0.
L	0.	0.	0.	0.	0.	0.	0.18	0.60	0.	0.
R	0.	0.	0.	0.14	0.	0.	0.19	2.71	0.	0.
30 A	0.	0.	0.	0.14	0.	0.	0.19	2.71	0.	0.
L	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
R	0.	0.	0.	0.55	0.	0.	0.17	2.45	0.	0.
40 A	0.	0.	0.	0.55	0.	0.	0.17	2.45	0.	0.
L	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
R	0.	0.	0.	0.84	0.	0.	0.15	1.54	0.	0.
50 A	0.	0.	0.	0.84	0.	0.	0.15	1.54	0.	0.
L	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
R	0.	0.	0.	0.30	0.	0.	0.17	0.	0.	0.
60 A	0.	0.	0.	0.30	0.14	0.	0.17	3.20	0.	0.
L	0.	0.	0.	0.	0.14	0.	0.	3.20	0.	0.

RADIANCE VALUES ARE IN MICROWATTS. VA AND SA ARE IN DEGREES.

FIGURE 211

IR MEAN RADIANCE AS A FUNCTION OF SUN AZIMUTH

FILTER 6 AT 1309 AST INSOL ANGLE 43.4 DEG
SPECTRAL BAND 2.50 TO 2.78 MICRONS ELEVATION 30.5 KM

VA	0	10	20	30	40	50	60	70	80	90
SA										
R	0.	0.	0.	0.78	0.	0.	0.26	0.	0.	0.
70 A	0.	0.	0.	0.78	0.45	0.	0.26	1.57	0.	0.
L	0.	0.	0.	0.	0.45	0.	0.	1.57	0.	0.
R	0.	0.	0.	0.48	0.	0.	0.51	0.	0.	0.
80 A	0.	0.	0.	0.48	0.75	0.	0.51	1.14	0.	0.
L	0.	0.	0.	0.	0.75	0.	0.	1.14	0.	0.
R	0.	0.	0.	0.20	0.	0.	0.32	0.	0.	0.
90 A	0.	0.	0.	0.20	0.31	0.	0.32	0.61	0.	0.
L	0.	0.	0.	0.	0.31	0.	0.	0.61	0.	0.
R	0.	0.	0.	0.39	0.	0.	0.24	0.	0.	0.
100 A	0.	0.	0.	0.39	0.45	0.	0.24	0.72	0.	0.
L	0.	0.	0.	0.	0.45	0.	0.	0.72	0.	0.
R	0.	0.	0.	0.21	0.	0.	0.53	0.	0.	0.
110 A	0.	0.	0.	0.21	0.32	0.	0.53	0.49	0.	0.
L	0.	0.	0.	0.	0.32	0.	0.	0.49	0.	0.
R	0.	0.	0.	0.	0.	0.	0.17	0.	0.	0.
120 A	0.	0.	0.	0.	0.40	0.	0.17	0.64	0.	0.
L	0.	0.	0.	0.	0.40	0.	0.	0.64	0.	0.

RADIANCE VALUES ARE IN MICROWATTS. VA AND SA ARE IN DEGREES.

FIGURE 211 CONT.

IR MEAN RADIANCE AS A FUNCTION OF SUN AZIMUTH

FILTER 6 AT 1309 AST INSOL ANGLE 43.4 DEG
SPECTRAL BAND 2.50 TO 2.78 MICRONS ELEVATION 30.5 KM

	VA	0	10	20	30	40	50	60	70	80	90
SA											
	R	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
130	A	0.	0.	0.	0.	0.52	0.	0.	0.60	0.	0.
	L	0.	0.	0.	0.	0.52	0.	0.	0.60	0.	0.
	R	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
140	A	0.	0.	0.	0.	0.59	0.	0.	0.32	0.	0.
	L	0.	0.	0.	0.	0.59	0.	0.	0.32	0.	0.
	R	0.	0.	0.	0.	0.75	0.	0.	0.	0.	0.
150	A	0.	0.	0.	0.	0.43	0.	0.	0.16	0.	0.
	L	0.	0.	0.	0.	0.30	0.	0.	0.16	0.	0.
	R	0.	0.	0.	0.	0.60	0.	0.	0.94	0.	0.
160	A	0.	0.	0.	0.	0.44	0.	0.	0.80	0.	0.
	L	0.	0.	0.	0.	0.18	0.	0.	0.30	0.	0.
	R	0.	0.	0.	0.	0.39	0.	0.	0.49	0.	0.
170	A	0.	0.	0.	0.	0.31	0.	0.	0.39	0.	0.
	L	0.	0.	0.	0.	0.23	0.	0.	0.29	0.	0.
	R	0.	0.	0.	0.	0.33	0.	0.	0.55	0.	0.
180	A	0.	0.	0.	0.	0.32	0.	0.	0.44	0.	0.
	L	0.	0.	0.	0.	0.27	0.	0.	0.35	0.	0.

RADIANCE VALUES ARE IN MICROWATTS. VA AND SA ARE IN DEGREES.

FIGURE 211 CONT.

IR RMS FLUCTUATION AS A FUNCTION OF SUN AZIMUTH

FILTER 6 AT 1309 AST INSOL ANGLE 43.4 DEG
SPECTRAL BAND 2.50 TO 2.78 MICRONS ELEVATION 30.5 KM

VA	0	10	20	30	40	50	60	70	80	90
SA										
R	0.	0.	0.	0.10	0.	0.	0.15	0.24	0.	0.
0 A	0.	0.	0.	0.16	0.	0.	0.19	0.34	0.	0.
L	0.	0.	0.	0.12	0.	0.	0.11	0.23	0.	0.
R	0.	0.	0.	0.12	0.	0.	0.13	0.56	0.	0.
10 A	0.	0.	0.	0.16	0.	0.	0.19	0.60	0.	0.
L	0.	0.	0.	0.11	0.	0.	0.13	0.20	0.	0.
R	0.	0.	0.	0.11	0.	0.	0.13	0.79	0.	0.
20 A	0.	0.	0.	0.11	0.	0.	0.19	0.82	0.	0.
L	0.	0.	0.	0.	0.	0.	0.13	0.22	0.	0.
R	0.	0.	0.	0.12	0.	0.	0.13	0.44	0.	0.
30 A	0.	0.	0.	0.12	0.	0.	0.13	0.44	0.	0.
L	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
R	0.	0.	0.	0.33	0.	0.	0.12	1.09	0.	0.
40 A	0.	0.	0.	0.33	0.	0.	0.12	1.09	0.	0.
L	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
R	0.	0.	0.	0.20	0.	0.	0.12	0.32	0.	0.
50 A	0.	0.	0.	0.20	0.	0.	0.12	0.32	0.	0.
L	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
R	0.	0.	0.	0.20	0.	0.	0.13	0.	0.	0.
60 A	0.	0.	0.	0.20	0.12	0.	0.13	0.34	0.	0.
L	0.	0.	0.	0.	0.12	0.	0.	0.34	0.	0.

RADIANCE VALUES ARE IN MICROWATTS. VA AND SA ARE IN DEGREES.

FIGURE 212

IR RMS FLUCTUATION AS A FUNCTION OF SUN AZIMUTH

FILTER 6 AT 1309 AST INSOL ANGLE 43.4 DEG
SPECTRAL BAND 2.50 TO 2.78 MICRONS ELEVATION 30.5 KM

VA	0	10	20	30	40	50	60	70	80	90
SA										
R	0.	0.	0.	0.23	0.	0.	0.18	0.	0.	0.
70 A	0.	0.	0.	0.23	0.28	0.	0.18	0.43	0.	0.
L	0.	0.	0.	0.	0.28	0.	0.	0.43	0.	0.
R	0.	0.	0.	0.22	0.	0.	0.21	0.	0.	0.
80 A	0.	0.	0.	0.22	0.22	0.	0.21	0.66	0.	0.
L	0.	0.	0.	0.	0.22	0.	0.	0.66	0.	0.
R	0.	0.	0.	0.15	0.	0.	0.20	0.	0.	0.
90 A	0.	0.	0.	0.15	0.19	0.	0.20	0.24	0.	0.
L	0.	0.	0.	0.	0.19	0.	0.	0.24	0.	0.
R	0.	0.	0.	0.21	0.	0.	0.16	0.	0.	0.
100 A	0.	0.	0.	0.21	0.23	0.	0.16	0.34	0.	0.
L	0.	0.	0.	0.	0.23	0.	0.	0.34	0.	0.
R	0.	0.	0.	0.16	0.	0.	0.29	0.	0.	0.
110 A	0.	0.	0.	0.16	0.19	0.	0.29	0.22	0.	0.
L	0.	0.	0.	0.	0.19	0.	0.	0.22	0.	0.
R	0.	0.	0.	0.	0.	0.	0.13	0.	0.	0.
120 A	0.	0.	0.	0.	0.19	0.	0.13	0.27	0.	0.
L	0.	0.	0.	0.	0.19	0.	0.	0.27	0.	0.

RADIANCE VALUES ARE IN MICROWATTS. VA AND SA ARE IN DEGREES.

FIGURE 212 CONT.

IR RMS FLUCTUATION AS A FUNCTION OF SUN AZIMUTH

FILTER 6 AT 1309 AST INSOL ANGLE 43.4 DEG
SPECTRAL BAND 2.50 TO 2.78 MICRONS ELEVATION 30.5 KM

	VA	0	10	20	30	40	50	60	70	80	90
SA											
	R	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
130	A	0.	0.	0.	0.	0.22	0.	0.	0.24	0.	0.
	L	0.	0.	0.	0.	0.22	0.	0.	0.24	0.	0.
	R	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
140	A	0.	0.	0.	0.	0.18	0.	0.	0.22	0.	0.
	L	0.	0.	0.	0.	0.18	0.	0.	0.22	0.	0.
	R	0.	0.	0.	0.	0.19	0.	0.	0.	0.	0.
150	A	0.	0.	0.	0.	0.27	0.	0.	0.12	0.	0.
	L	0.	0.	0.	0.	0.19	0.	0.	0.12	0.	0.
	R	0.	0.	0.	0.	0.20	0.	0.	0.29	0.	0.
160	A	0.	0.	0.	0.	0.24	0.	0.	0.35	0.	0.
	L	0.	0.	0.	0.	0.14	0.	0.	0.19	0.	0.
	R	0.	0.	0.	0.	0.19	0.	0.	0.20	0.	0.
170	A	0.	0.	0.	0.	0.24	0.	0.	0.27	0.	0.
	L	0.	0.	0.	0.	0.15	0.	0.	0.18	0.	0.
	R	0.	0.	0.	0.	0.17	0.	0.	0.25	0.	0.
180	A	0.	0.	0.	0.	0.27	0.	0.	0.32	0.	0.
	L	0.	0.	0.	0.	0.21	0.	0.	0.20	0.	0.

RADIANCE VALUES ARE IN MICROWATTS. VA AND SA ARE IN DEGREES.

FIGURE 212 CONT.

IR NUMBER OF OBSERVATIONS AS A FUNCTION OF SCATTERING ANGLE

FILTER 6 AT 1309 AST INSOL ANGLE 43.4 DEG
SPECTRAL BAND 2.50 TO 2.78 MICRONS ELEVATION 30.5 KM

SA	VA	0	10	20	30	40	50	60	70	80	90
0		0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
10		0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
20		0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
30		0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
40		0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
50		0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
60		0.	0.	0.	0.	0.	0.	0.	720.	0.	0.
70		0.	0.	0.	0.	0.	0.	0.	510.	0.	0.
80		0.	0.	0.	0.	0.	0.	900.	330.	0.	0.
90		0.	0.	0.	0.	0.	0.	373.	285.	0.	0.
100		0.	0.	0.	0.	0.	0.	300.	236.	0.	0.
110		0.	0.	0.	1020.	225.	0.	270.	135.	0.	0.
120		0.	0.	0.	405.	299.	0.	225.	225.	0.	0.
130		0.	0.	0.	420.	300.	0.	255.	270.	0.	0.
140		0.	0.	0.	255.	270.	0.	15.	254.	0.	0.
150		0.	0.	0.	0.	270.	0.	0.	804.	0.	0.
160		0.	0.	0.	0.	345.	0.	0.	0.	0.	0.
170		0.	0.	0.	0.	450.	0.	0.	0.	0.	0.
180		0.	0.	0.	0.	210.	0.	0.	0.	0.	0.

RADIANCE VALUES ARE IN MICROWATTS. VA AND SA ARE IN DEGREES.

FIGURE 213

IR MEAN RADIANCE AS A FUNCTION OF SCATTERING ANGLE

FILTER 6 AT 1309 AST INSOL ANGLE 43.4 DEG
SPECTRAL BAND 2.50 TO 2.78 MICRONS ELEVATION 30.5 KM

VA SA	0	10	20	30	40	50	60	70	80	90
0	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
10	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
20	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
30	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
40	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
50	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
60	0.	0.	0.	0.	0.	0.	0.	0.93	0.	0.
70	0.	0.	0.	0.	0.	0.	0.	2.43	0.	0.
80	0.	0.	0.	0.	0.	0.	0.18	0.95	0.	0.
90	0.	0.	0.	0.	0.	0.	0.16	2.01	0.	0.
100	0.	0.	0.	0.	0.	0.	0.29	0.90	0.	0.
110	0.	0.	0.	0.27	0.39	0.	0.39	0.64	0.	0.
120	0.	0.	0.	0.58	0.51	0.	0.35	0.62	0.	0.
130	0.	0.	0.	0.31	0.39	0.	0.29	0.57	0.	0.
140	0.	0.	0.	0.24	0.39	0.	0.14	0.25	0.	0.
150	0.	0.	0.	0.	0.58	0.	0.	0.53	0.	0.
160	0.	0.	0.	0.	0.43	0.	0.	0.	0.	0.
170	0.	0.	0.	0.	0.37	0.	0.	0.	0.	0.
180	0.	0.	0.	0.	0.31	0.	0.	0.	0.	0.

RADIANCE VALUES ARE IN MICROWATTS. VA AND SA ARE IN DEGREES.

FIGURE 214

IR RMS FLUCTUATION AS A FUNCTION OF SCATTERING ANGLE

FILTER 6 AT 1309 ÅST INSOL ANGLE 43.4 DEG
SPECTRAL BAND 2.50 TO 2.78 MICRONS ELEVATION 30.5 KM

SA	VA	0	10	20	30	40	50	60	70	80	90
0	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
10	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
20	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
30	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
40	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
50	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
60	0.	0.	0.	0.	0.	0.	0.	0.	0.70	0.	0.
70	0.	0.	0.	0.	0.	0.	0.	0.	0.90	0.	0.
80	0.	0.	0.	0.	0.	0.	0.	0.13	0.64	0.	0.
90	0.	0.	0.	0.	0.	0.	0.	0.13	0.82	0.	0.
100	0.	0.	0.	0.	0.	0.	0.	0.20	0.62	0.	0.
110	0.	0.	0.	0.28	0.30	0.	0.23	0.32	0.	0.	0.
120	0.	0.	0.	0.33	0.30	0.	0.25	0.26	0.	0.	0.
130	0.	0.	0.	0.22	0.23	0.	0.26	0.23	0.	0.	0.
140	0.	0.	0.	0.17	0.19	0.	0.11	0.19	0.	0.	0.
150	0.	0.	0.	0.	0.19	0.	0.	0.35	0.	0.	0.
160	0.	0.	0.	0.	0.28	0.	0.	0.	0.	0.	0.
170	0.	0.	0.	0.	0.24	0.	0.	0.	0.	0.	0.
180	0.	0.	0.	0.	0.18	0.	0.	0.	0.	0.	0.

RADIANCE VALUES ARE IN MICROWATTS. VA AND SA ARE IN DEGREES.

FIGURE 215

IR NUMBER OF OBSERVATIONS AS A FUNCTION OF SUN AZIMUTH

FILTER 4 AT 1315 AST INSOL ANGLE 43.7 DEG
SPECTRAL BAND 2.76 TO 3.25 MICRONS ELEVATION 30.5 KM

VA SA	0	10	20	30	40	50	60	70	80	90
R	0.	0.	0.	105.	0.	0.	0.	75.	0.	0.
0 A	0.	0.	0.	98.	0.	0.	0.	90.	0.	0.
L	0.	0.	0.	90.	0.	0.	0.	105.	0.	0.
R	0.	0.	0.	210.	0.	0.	0.	165.	0.	0.
10 A	0.	0.	0.	188.	0.	0.	0.	158.	0.	0.
L	0.	0.	0.	165.	0.	0.	0.	150.	0.	0.
R	0.	0.	0.	180.	0.	0.	0.	180.	0.	0.
20 A	0.	0.	0.	90.	0.	0.	0.	135.	13.	0.
L	0.	0.	0.	0.	0.	0.	0.	90.	25.	0.
R	0.	0.	0.	210.	0.	0.	0.	150.	0.	0.
30 A	0.	0.	0.	105.	0.	0.	0.	75.	0.	0.
L	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
R	0.	0.	0.	210.	0.	0.	0.	150.	0.	0.
40 A	0.	0.	0.	105.	0.	0.	0.	75.	0.	0.
L	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
R	0.	0.	0.	195.	0.	0.	0.	195.	0.	0.
50 A	0.	0.	0.	98.	0.	0.	0.	98.	0.	0.
L	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
R	0.	0.	0.	210.	0.	0.	0.	150.	0.	0.
60 A	0.	0.	0.	105.	0.	0.	0.	118.	0.	0.
L	0.	0.	0.	0.	0.	0.	0.	85.	0.	0.

RADIANCE VALUES ARE IN MICROWATTS. VA AND SA ARE IN DEGREES.

FIGURE 216

IR NUMBER OF OBSERVATIONS AS A FUNCTION OF SUN AZIMUTH

FILTER 4 AT 1315 AST INSOL ANGLE 43.7 DEG
SPECTRAL BAND 2.76 TO 3.25 MICRONS ELEVATION 30.5 KM

VA SA	0	10	20	30	40	50	60	70	80	90
R	0.	0.	0.	195.	0.	0.	0.	135.	0.	0.
70 A	0.	0.	0.	98.	83.	0.	0.	173.	0.	0.
L	0.	0.	0.	0.	165.	0.	0.	210.	0.	0.
R	0.	0.	0.	210.	0.	0.	0.	178.	0.	0.
80 A	0.	0.	0.	105.	83.	0.	0.	187.	0.	0.
L	0.	0.	0.	0.	165.	0.	0.	195.	0.	0.
R	0.	0.	0.	180.	0.	0.	0.	150.	0.	0.
90 A	0.	0.	0.	90.	53.	30.	0.	188.	0.	0.
L	0.	0.	0.	0.	105.	60.	0.	225.	0.	0.
R	0.	0.	0.	209.	0.	0.	0.	180.	0.	0.
100 A	0.	0.	0.	105.	83.	0.	0.	180.	0.	0.
L	0.	0.	0.	0.	165.	0.	0.	180.	0.	0.
R	0.	0.	0.	225.	0.	0.	0.	180.	0.	0.
110 A	0.	0.	0.	113.	83.	0.	0.	188.	0.	0.
L	0.	0.	0.	0.	165.	0.	0.	195.	0.	0.
R	0.	0.	0.	195.	0.	0.	0.	120.	0.	0.
120 A	0.	0.	0.	98.	75.	0.	0.	158.	0.	0.
L	0.	0.	0.	0.	150.	0.	0.	195.	0.	0.

RADIANCE VALUES ARE IN MICROWATTS. VA AND SA ARE IN DEGREES.

FIGURE 216 CONT.

IR NUMBER OF OBSERVATIONS AS A FUNCTION OF SUN AZIMUTH

FILTER 4 AT 1315 AST INSOL ANGLE 43.7 DEG
SPECTRAL BAND 2.76 TO 3.25 MICRONS ELEVATION 30.5 KM

VA	0	10	20	30	40	50	60	70	80	90
SA										
R	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
130 A	0.	0.	0.	0.	90.	0.	0.	60.	0.	0.
L	0.	0.	0.	0.	180.	0.	0.	120.	0.	0.
R	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
140 A	0.	0.	0.	0.	83.	0.	0.	98.	0.	0.
L	0.	0.	0.	0.	165.	0.	0.	195.	0.	0.
R	0.	0.	0.	0.	60.	0.	0.	75.	0.	0.
150 A	0.	0.	0.	0.	120.	0.	0.	143.	0.	0.
L	0.	0.	0.	0.	179.	0.	0.	210.	0.	0.
R	0.	0.	0.	0.	180.	0.	0.	180.	0.	0.
160 A	0.	0.	0.	0.	188.	0.	0.	187.	0.	0.
L	0.	0.	0.	0.	195.	0.	0.	193.	0.	0.
R	0.	0.	0.	0.	180.	0.	0.	225.	0.	0.
170 A	0.	0.	0.	0.	165.	0.	0.	218.	0.	0.
L	0.	0.	0.	0.	149.	0.	0.	210.	0.	0.
R	0.	0.	0.	0.	75.	0.	0.	105.	0.	0.
180 A	0.	0.	0.	0.	98.	0.	0.	98.	0.	0.
L	0.	0.	0.	0.	120.	0.	0.	90.	0.	0.

RADIANCE VALUES ARE IN MICROWATTS. VA AND SA ARE IN DEGREES.

FIGURE 216 CONT.

IR MEAN RADIANCE AS A FUNCTION OF SUN AZIMUTH

FILTER 4 AT 1315 AST INSOL ANGLE 43.7 DEG
SPECTRAL BAND 2.76 TO 3.25 MICRONS ELEVATION 30.5 KM

VA	0	10	20	30	40	50	60	70	80	90
SA										
R	0.	0.	0.	0.47	0.	0.	0.	3.76	0.	0.
0 A	0.	0.	0.	0.46	0.	0.	0.	3.81	0.	0.
L	0.	0.	0.	0.44	0.	0.	0.	3.85	0.	0.
R	0.	0.	0.	0.86	0.	0.	0.	3.47	0.	0.
10 A	0.	0.	0.	0.60	0.	0.	0.	3.53	0.	0.
L	0.	0.	0.	0.28	0.	0.	0.	3.60	0.	0.
R	0.	0.	0.	2.42	0.	0.	0.	3.45	0.	0.
20 A	0.	0.	0.	2.42	0.	0.	0.	3.22	2.58	0.
L	0.	0.	0.	0.	0.	0.	0.	2.78	2.58	0.
R	0.	0.	0.	2.37	0.	0.	0.	3.63	0.	0.
30 A	0.	0.	0.	2.37	0.	0.	0.	3.63	0.	0.
L	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
R	0.	0.	0.	2.46	0.	0.	0.	3.42	0.	0.
40 A	0.	0.	0.	2.46	0.	0.	0.	3.42	0.	0.
L	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
R	0.	0.	0.	1.35	0.	0.	0.	3.39	0.	0.
50 A	0.	0.	0.	1.35	0.	0.	0.	3.39	0.	0.
L	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
R	0.	0.	0.	0.79	0.	0.	0.	3.67	0.	0.
60 A	0.	0.	0.	0.79	0.	0.	0.	3.69	0.	0.
L	0.	0.	0.	0.	0.	0.	0.	3.74	0.	0.

RADIANCE VALUES ARE IN MICROWATTS. VA AND SA ARE IN DEGREES.

FIGURE 217

IR MEAN RADIANCE AS A FUNCTION OF SUN AZIMUTH

FILTER 4 AT 1315 AST INSOL ANGLE 43.7 DEG
SPECTRAL BAND 2.76 TO 3.25 MICRONS ELEVATION 30.5 KM

VA	0	10	20	30	40	50	60	70	80	90
SA										
R	0.	0.	0.	0.99	0.	0.	0.	3.52	0.	0.
70 A	0.	0.	0.	0.99	0.28	0.	0.	3.38	0.	0.
L	0.	0.	0.	0.	0.28	0.	0.	3.30	0.	0.
R	0.	0.	0.	0.78	0.	0.	0.	2.41	0.	0.
80 A	0.	0.	0.	0.78	0.41	0.	0.	2.63	0.	0.
L	0.	0.	0.	0.	0.41	0.	0.	2.84	0.	0.
R	0.	0.	0.	0.63	0.	0.	0.	1.44	0.	0.
90 A	0.	0.	0.	0.63	0.29	0.16	0.	1.93	0.	0.
L	0.	0.	0.	0.	0.29	0.16	0.	2.26	0.	0.
R	0.	0.	0.	0.47	0.	0.	0.	1.13	0.	0.
100 A	0.	0.	0.	0.47	0.40	0.	0.	1.37	0.	0.
L	0.	0.	0.	0.	0.40	0.	0.	1.62	0.	0.
R	0.	0.	0.	0.37	0.	0.	0.	1.69	0.	0.
110 A	0.	0.	0.	0.37	0.49	0.	0.	1.62	0.	0.
L	0.	0.	0.	0.	0.49	0.	0.	1.56	0.	0.
R	0.	0.	0.	0.42	0.	0.	0.	1.64	0.	0.
120 A	0.	0.	0.	0.42	0.56	0.	0.	1.36	0.	0.
L	0.	0.	0.	0.	0.56	0.	0.	1.19	0.	0.

RADIANCE VALUES ARE IN MICROWATTS. VA AND SA ARE IN DEGREES.

FIGURE 217 CONT.

IR MEAN RADIANCE AS A FUNCTION OF SUN AZIMUTH

FILTER 4 AT 1315 AST INSOL ANGLE 43.7 DEG
SPECTRAL BAND 2.76 TO 3.25 MICRONS ELEVATION 30.5 KM

	VA	0	10	20	30	40	50	60	70	80	90
SA											
	R	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
130	A	0.	0.	0.	0.	0.51	0.	0.	1.78	0.	0.
	L	0.	0.	0.	0.	0.51	0.	0.	1.78	0.	0.
	R	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
140	A	0.	0.	0.	0.	0.47	0.	0.	0.77	0.	0.
	L	0.	0.	0.	0.	0.47	0.	0.	0.77	0.	0.
	R	0.	0.	0.	0.	0.89	0.	0.	1.40	0.	0.
150	A	0.	0.	0.	0.	0.60	0.	0.	0.47	0.	0.
	L	0.	0.	0.	0.	0.50	0.	0.	0.13	0.	0.
	R	0.	0.	0.	0.	0.31	0.	0.	1.49	0.	0.
160	A	0.	0.	0.	0.	0.35	0.	0.	1.07	0.	0.
	L	0.	0.	0.	0.	0.39	0.	0.	0.68	0.	0.
	R	0.	0.	0.	0.	0.28	0.	0.	1.78	0.	0.
170	A	0.	0.	0.	0.	0.36	0.	0.	1.32	0.	0.
	L	0.	0.	0.	0.	0.46	0.	0.	0.83	0.	0.
	R	0.	0.	0.	0.	0.20	0.	0.	1.94	0.	0.
180	A	0.	0.	0.	0.	0.50	0.	0.	1.81	0.	0.
	L	0.	0.	0.	0.	0.68	0.	0.	1.65	0.	0.

RADIANCE VALUES ARE IN MICROWATTS. VA AND SA ARE IN DEGREES.

FIGURE 217 CONT.

IR RMS FLUCTUATION AS A FUNCTION OF SUN AZIMUTH

FILTER 4 AT 1315 AST INSOL ANGLE 43.7 DEG
SPECTRAL BAND 2.76 TO 3.25 MICRONS ELEVATION 30-5 KM

VA	0	10	20	30	40	50	60	70	80	90
SA										
R	0.	0.	0.	0.17	0.	0.	0.	0.30	0.	0.
0 A	0.	0.	0.	0.26	0.	0.	0.	0.36	0.	0.
L	0.	0.	0.	0.20	0.	0.	0.	0.20	0.	0.
R	0.	0.	0.	0.54	0.	0.	0.	0.27	0.	0.
10 A	0.	0.	0.	0.58	0.	0.	0.	0.54	0.	0.
L	0.	0.	0.	0.22	0.	0.	0.	0.47	0.	0.
R	0.	0.	0.	0.21	0.	0.	0.	0.31	0.	0.
20 A	0.	0.	0.	0.21	0.	0.	0.	0.45	0.71	0.
L	0.	0.	0.	0.	0.	0.	0.	0.33	0.71	0.
R	0.	0.	0.	0.31	0.	0.	0.	0.42	0.	0.
30 A	0.	0.	0.	0.31	0.	0.	0.	0.42	0.	0.
L	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
R	0.	0.	0.	0.45	0.	0.	0.	0.25	0.	0.
40 A	0.	0.	0.	0.45	0.	0.	0.	0.25	0.	0.
L	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
R	0.	0.	0.	0.37	0.	0.	0.	0.27	0.	0.
50 A	0.	0.	0.	0.37	0.	0.	0.	0.27	0.	0.
L	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
R	0.	0.	0.	0.20	0.	0.	0.	0.26	0.	0.
60 A	0.	0.	0.	0.20	0.	0.	0.	0.51	0.	0.
L	0.	0.	0.	0.	0.	0.	0.	0.43	0.	0.

RADIANCE VALUES ARE IN MICROWATTS. VA AND SA ARE IN DEGREES.

FIGURE 218

IR RMS FLUCTUATION AS A FUNCTION OF SUN AZIMUTH

FILTER 4 AT 1315 AST INSOL ANGLE 43.7 DEG
SPECTRAL BAND 2.76 TO 3.25 MICRONS ELEVATION 30.5 KM

VA	0	10	20	30	40	50	60	70	80	90
SA										
R	0.	0.	0.	0.23	0.	0.	0.	0.34	0.	0.
70 A	0.	0.	0.	0.23	0.17	0.	0.	0.74	0.	0.
L	0.	0.	0.	0.	0.17	0.	0.	0.66	0.	0.
R	0.	0.	0.	0.19	0.	0.	0.	0.36	0.	0.
80 A	0.	0.	0.	0.19	0.18	0.	0.	0.60	0.	0.
L	0.	0.	0.	0.	0.18	0.	0.	0.48	0.	0.
R	0.	0.	0.	0.18	0.	0.	0.	0.32	0.	0.
90 A	0.	0.	0.	0.18	0.16	0.11	0.	0.58	0.	0.
L	0.	0.	0.	0.	0.16	0.11	0.	0.48	0.	0.
R	0.	0.	0.	0.21	0.	0.	0.	0.28	0.	0.
100 A	0.	0.	0.	0.21	0.16	0.	0.	0.47	0.	0.
L	0.	0.	0.	0.	0.16	0.	0.	0.38	0.	0.
R	0.	0.	0.	0.19	0.	0.	0.	0.29	0.	0.
110 A	0.	0.	0.	0.19	0.20	0.	0.	0.49	0.	0.
L	0.	0.	0.	0.	0.20	0.	0.	0.39	0.	0.
R	0.	0.	0.	0.19	0.	0.	0.	0.23	0.	0.
120 A	0.	0.	0.	0.19	0.21	0.	0.	0.36	0.	0.
L	0.	0.	0.	0.	0.21	0.	0.	0.27	0.	0.

RADIANCE VALUES ARE IN MICROWATTS. VA AND SA ARE IN DEGREES.

FIGURE 218 CONT.

IR RMS FLUCTUATION AS A FUNCTION OF SUN AZIMUTH

FILTER 4 AT 1315 AST INSOL ANGLE 43.7 DEG
SPECTRAL BAND 2.76 TO 3.25 MICRONS ELEVATION 30.5 KM

VA	0	10	20	30	40	50	60	70	80	90
SA										
R	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
130 A	0.	0.	0.	0.	0.19	0.	0.	0.24	0.	0.
L	0.	0.	0.	0.	0.19	0.	0.	0.24	0.	0.
R	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
140 A	0.	0.	0.	0.	0.18	0.	0.	0.39	0.	0.
L	0.	0.	0.	0.	0.18	0.	0.	0.39	0.	0.
R	0.	0.	0.	0.	0.23	0.	0.	0.21	0.	0.
150 A	0.	0.	0.	0.	0.30	0.	0.	0.24	0.	0.
L	0.	0.	0.	0.	0.19	0.	0.	0.11	0.	0.
R	0.	0.	0.	0.	0.21	0.	0.	0.20	0.	0.
160 A	0.	0.	0.	0.	0.27	0.	0.	0.37	0.	0.
L	0.	0.	0.	0.	0.18	0.	0.	0.31	0.	0.
R	0.	0.	0.	0.	0.17	0.	0.	0.28	0.	0.
170 A	0.	0.	0.	0.	0.26	0.	0.	0.38	0.	0.
L	0.	0.	0.	0.	0.20	0.	0.	0.26	0.	0.
R	0.	0.	0.	0.	0.15	0.	0.	0.24	0.	0.
180 A	0.	0.	0.	0.	0.26	0.	0.	0.39	0.	0.
L	0.	0.	0.	0.	0.22	0.	0.	0.31	0.	0.

RADIANCE VALUES ARE IN MICROWATTS. VA AND SA ARE IN DEGREES.

FIGURE 218 CONT.

IR NUMBER OF OBSERVATIONS AS A FUNCTION OF SCATTERING ANGLE

FILTER 4 AT 1315 AST INSOL ANGLE 43.7 DEG
SPECTRAL BAND 2.76 TO 3.25 MICRONS ELEVATION 30.5 KM

SA	VA	0	10	20	30	40	50	60	70	80	90
0		0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
10		0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
20		0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
30		0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
40		0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
50		0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
60		0.	0.	0.	0.	0.	0.	0.	720.	25.	0.
70		0.	0.	0.	0.	0.	0.	0.	375.	0.	0.
80		0.	0.	0.	0.	0.	0.	0.	330.	0.	0.
90		0.	0.	0.	0.	0.	0.	0.	488.	0.	0.
100		0.	0.	0.	0.	0.	0.	0.	600.	0.	0.
110		0.	0.	0.	1290.	255.	0.	0.	525.	0.	0.
120		0.	0.	0.	585.	225.	60.	0.	480.	0.	0.
130		0.	0.	0.	450.	270.	0.	0.	240.	0.	0.
140		0.	0.	0.	464.	240.	0.	0.	285.	0.	0.
150		0.	0.	0.	0.	255.	0.	0.	1198.	0.	0.
160		0.	0.	0.	0.	389.	0.	0.	0.	0.	0.
170		0.	0.	0.	0.	509.	0.	0.	0.	0.	0.
180		0.	0.	0.	0.	255.	0.	0.	0.	0.	0.

RADIANCE VALUES ARE IN MICROWATTS. VA AND SA ARE IN DEGREES.

FIGURE 219

IR MEAN RADIANCE AS A FUNCTION OF SCATTERING ANGLE

FILTER 4 AT 1315 AST INSOL ANGLE 43.7 DEG
SPECTRAL BAND 2.76 TO 3.25 MICRONS ELEVATION 30.5 KM

SA	VA	0	10	20	30	40	50	60	70	80	90
0	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
10	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
20	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
30	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
40	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
50	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
60	0.	0.	0.	0.	0.	0.	0.	0.	3.49	2.58	0.
70	0.	0.	0.	0.	0.	0.	0.	0.	3.50	0.	0.
80	0.	0.	0.	0.	0.	0.	0.	0.	3.56	0.	0.
90	0.	0.	0.	0.	0.	0.	0.	0.	3.31	0.	0.
100	0.	0.	0.	0.	0.	0.	0.	0.	2.25	0.	0.
110	0.	0.	0.	1.51	0.35	0.	0.	0.	1.53	0.	0.
120	0.	0.	0.	0.89	0.33	0.16	0.	0.	1.54	0.	0.
130	0.	0.	0.	0.60	0.44	0.	0.	0.	1.53	0.	0.
140	0.	0.	0.	0.40	0.56	0.	0.	0.	0.57	0.	0.
150	0.	0.	0.	0.	0.48	0.	0.	0.	1.21	0.	0.
160	0.	0.	0.	0.	0.53	0.	0.	0.	0.	0.	0.
170	0.	0.	0.	0.	0.33	0.	0.	0.	0.	0.	0.
180	0.	0.	0.	0.	0.48	0.	0.	0.	0.	0.	0.

RADIANCE VALUES ARE IN MICROWATTS. VA AND SA ARE IN DEGREES.

FIGURE 220

IR RMS FLUCTUATION AS A FUNCTION OF SCATTERING ANGLE

FILTER 4 AT 1315 AST INSOL ANGLE 43.7 DEG
SPECTRAL BAND 2.76 TO 3.25 MICRONS ELEVATION 30.5 KM

VA	0	10	20	30	40	50	60	70	80	90
SA										
0	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
10	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
20	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
30	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
40	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
50	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
60	0.	0.	0.	0.	0.	0.	0.	0.44	0.71	0.
70	0.	0.	0.	0.	0.	0.	0.	0.37	0.	0.
80	0.	0.	0.	0.	0.	0.	0.	0.30	0.	0.
90	0.	0.	0.	0.	0.	0.	0.	0.63	0.	0.
100	0.	0.	0.	0.	0.	0.	0.	0.73	0.	0.
110	0.	0.	0.	0.97	0.19	0.	0.	0.40	0.	0.
120	0.	0.	0.	0.25	0.18	0.11	0.	0.39	0.	0.
130	0.	0.	0.	0.23	0.18	0.	0.	0.36	0.	0.
140	0.	0.	0.	0.19	0.21	0.	0.	0.44	0.	0.
150	0.	0.	0.	0.	0.17	0.	0.	0.62	0.	0.
160	0.	0.	0.	0.	0.26	0.	0.	0.	0.	0.
170	0.	0.	0.	0.	0.19	0.	0.	0.	0.	0.
180	0.	0.	0.	0.	0.29	0.	0.	0.	0.	0.

RADIANCE VALUES ARE IN MICROWATTS. VA AND SA ARE IN DEGREES.

FIGURE 221

IR NUMBER OF OBSERVATIONS AS A FUNCTION OF SUN AZIMUTH

FILTER 3 AT 1320 AST INSOL ANGLE 43.9 DEG
SPECTRAL BAND 2.37 TO 2.80 MICRONS ELEVATION 30.5 KM

VA SA	0	10	20	30	40	50	60	70	80	90
R	0.	0.	0.	0.	0.	60.	0.	90.	0.	0.
0 A	0.	0.	0.	0.	0.	83.	0.	98.	0.	0.
L	0.	0.	0.	0.	0.	105.	0.	105.	0.	0.
R	0.	0.	0.	0.	0.	165.	0.	180.	0.	0.
10 A	0.	0.	0.	0.	0.	169.	0.	195.	0.	0.
L	0.	0.	0.	0.	0.	173.	0.	210.	0.	0.
R	0.	0.	0.	0.	0.	150.	0.	210.	0.	0.
20 A	0.	0.	0.	0.	0.	75.	0.	173.	11.	0.
L	0.	0.	0.	0.	0.	0.	0.	135.	21.	0.
R	0.	0.	0.	0.	29.	135.	0.	195.	0.	0.
30 A	0.	0.	0.	0.	15.	68.	0.	98.	0.	0.
L	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
R	0.	0.	0.	0.	0.	135.	0.	225.	0.	0.
40 A	0.	0.	0.	0.	0.	68.	0.	113.	0.	0.
L	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
R	0.	0.	0.	0.	0.	231.	0.	180.	0.	0.
50 A	0.	0.	0.	0.	0.	116.	0.	90.	0.	0.
L	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
R	0.	0.	0.	0.	0.	195.	0.	177.	0.	0.
60 A	0.	0.	0.	0.	0.	98.	0.	156.	0.	0.
L	0.	0.	0.	0.	0.	0.	0.	135.	0.	0.

RADIANCE VALUES ARE IN MICROWATTS. VA AND SA ARE IN DEGREES.

FIGURE 222

IR NUMBER OF OBSERVATIONS AS A FUNCTION OF SUN AZIMUTH

FILTER 3 AT 1320 AST INSOL ANGLE 43.9 DEG
SPECTRAL BAND 2.37 TO 2.80 MICRONS ELEVATION 30.5 KM

VA	0	10	20	30	40	50	60	70	80	90
SA										
R	0.	0.	0.	0.	0.	195.	0.	194.	0.	0.
70 A	0.	0.	0.	67.	0.	98.	90.	192.	0.	0.
L	0.	0.	0.	134.	0.	0.	180.	189.	0.	0.
R	0.	0.	0.	0.	0.	210.	0.	149.	0.	0.
80 A	0.	0.	0.	98.	0.	105.	98.	170.	0.	0.
L	0.	0.	0.	195.	0.	0.	195.	191.	0.	0.
K	0.	0.	0.	0.	0.	195.	0.	191.	0.	0.
90 A	0.	0.	0.	83.	0.	98.	105.	197.	0.	0.
L	0.	0.	0.	165.	0.	0.	210.	203.	0.	0.
R	0.	0.	0.	0.	0.	165.	0.	203.	0.	0.
100 A	0.	0.	0.	89.	0.	83.	98.	197.	0.	0.
L	0.	0.	0.	178.	0.	0.	195.	190.	0.	0.
R	0.	0.	0.	0.	0.	215.	0.	195.	0.	0.
110 A	0.	0.	0.	74.	0.	108.	90.	183.	0.	0.
L	0.	0.	0.	147.	0.	0.	180.	170.	0.	0.
R	0.	0.	0.	0.	0.	165.	0.	60.	0.	0.
120 A	0.	0.	0.	90.	0.	83.	128.	126.	0.	0.
L	0.	0.	0.	180.	0.	0.	255.	191.	0.	0.

RADIANCE VALUES ARE IN MICROWATTS. VA AND SA ARE IN DEGREES.

FIGURE 222 CONT.

IR NUMBER OF OBSERVATIONS AS A FUNCTION OF SUN AZINUTH

FILTER 3 AT 1320 AST INSOL ANGLE 43.9 DEG
SPECTRAL BAND 2.37 TO 2.80 MICRONS ELEVATION 30.5 KM

VA SA	0	10	20	30	40	50	60	70	80	90
R	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
130 A	0.	0.	0.	90.	0.	0.	98.	83.	0.	0.
L	0.	0.	0.	180.	0.	0.	195.	165.	0.	0.
R	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
140 A	0.	0.	0.	0.	0.	0.	83.	105.	0.	0.
L	0.	0.	0.	0.	0.	0.	165.	210.	0.	0.
R	0.	0.	0.	0.	0.	0.	60.	80.	0.	0.
150 A	0.	0.	0.	0.	0.	0.	143.	137.	0.	0.
L	0.	0.	0.	0.	0.	0.	225.	194.	0.	0.
R	0.	0.	0.	0.	0.	0.	180.	194.	0.	0.
160 A	0.	0.	0.	0.	0.	0.	195.	202.	0.	0.
L	0.	0.	0.	0.	0.	0.	210.	210.	0.	0.
R	0.	0.	0.	0.	0.	0.	180.	202.	0.	0.
170 A	0.	0.	0.	0.	0.	0.	195.	184.	0.	0.
L	0.	0.	0.	0.	0.	0.	210.	165.	0.	0.
R	0.	0.	0.	0.	0.	0.	90.	37.	0.	0.
180 A	0.	0.	0.	0.	0.	0.	98.	74.	0.	0.
L	0.	0.	0.	0.	0.	0.	105.	110.	0.	0.

RADIANCE VALUES ARE IN MICROWATTS. VA AND SA ARE IN DEGREES.

FIGURE 222 CONT.

IR MEAN RADIANCE AS A FUNCTION OF SUN AZIMUTH

FILTER 3 AT 1320 AST INSOL ANGLE 43.9 DEG
SPECTRAL BAND 2.37 TO 2.80 MICRONS ELEVATION 30.5 KM

VA	0	10	20	30	40	50	60	70	80	90
SA										
R	0.	0.	0.	0.	0.	6.56	0.	34.19	0.	0.
0 A	0.	0.	0.	0.	0.	4.32	0.	33.38	0.	0.
L	0.	0.	0.	0.	0.	3.04	0.	32.70	0.	0.
R	0.	0.	0.	0.	0.	4.08	0.	35.03	0.	0.
10 A	0.	0.	0.	0.	0.	2.41	0.	35.31	0.	0.
L	0.	0.	0.	0.	0.	0.81	0.	35.55	0.	0.
R	0.	0.	0.	0.	0.	2.93	0.	33.42	0.	0.
20 A	0.	0.	0.	0.	0.	2.93	0.	35.00	31.90	0.
L	0.	0.	0.	0.	0.	0.	0.	37.45	31.90	0.
R	0.	0.	0.	0.	13.22	8.06	0.	39.53	0.	0.
30 A	0.	0.	0.	0.	13.22	8.06	0.	39.53	0.	0.
L	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
R	0.	0.	0.	0.	0.	1.74	0.	37.65	0.	0.
40 A	0.	0.	0.	0.	0.	1.74	0.	37.65	0.	0.
L	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
R	0.	0.	0.	0.	0.	4.25	0.	29.80	0.	0.
50 A	0.	0.	0.	0.	0.	4.25	0.	29.80	0.	0.
L	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
R	0.	0.	0.	0.	0.	7.07	0.	16.96	0.	0.
60 A	0.	0.	0.	0.	0.	7.07	0.	24.29	0.	0.
L	0.	0.	0.	0.	0.	0.	0.	33.90	0.	0.

RADIANCE VALUES ARE IN MICROWATTS. VA AND SA ARE IN DEGREES.

FIGURE 223

IR MEAN RADIANCE AS A FUNCTION OF SUN AZIMUTH

FILTER 3 AT 1320 AST INSOL ANGLE 43.9 DEG
 SPECTRAL BAND 2.37 TO 2.80 MICRONS ELEVATION 30.5 KM

VA	0	10	20	30	40	50	60	70	80	90
SA										
R	0.	0.	0.	0.	0.	5.30	0.	13.17	0.	0.
70 A	0.	0.	0.	1.49	0.	5.30	1.39	24.60	0.	0.
L	0.	0.	0.	1.49	0.	0.	1.39	36.33	0.	0.
R	0.	0.	0.	0.	0.	4.31	0.	19.75	0.	0.
80 A	0.	0.	0.	1.12	0.	4.31	5.54	24.26	0.	0.
L	0.	0.	0.	1.12	0.	0.	5.54	27.77	0.	0.
R	0.	0.	0.	0.	0.	7.72	0.	16.16	0.	0.
90 A	0.	0.	0.	3.03	0.	7.72	3.88	20.80	0.	0.
L	0.	0.	0.	3.03	0.	0.	3.88	25.17	0.	0.
R	0.	0.	0.	0.	0.	8.79	0.	17.13	0.	0.
100 A	0.	0.	0.	1.14	0.	8.79	1.02	18.42	0.	0.
L	0.	0.	0.	1.14	0.	0.	1.02	19.80	0.	0.
R	0.	0.	0.	0.	0.	8.19	0.	18.00	0.	0.
110 A	0.	0.	0.	5.47	0.	8.19	0.73	16.69	0.	0.
L	0.	0.	0.	5.47	0.	0.	0.73	15.18	0.	0.
R	0.	0.	0.	0.	0.	4.28	0.	16.66	0.	0.
120 A	0.	0.	0.	1.42	0.	4.28	2.16	15.94	0.	0.
L	0.	0.	0.	1.42	0.	0.	2.16	15.72	0.	0.

RADIANCE VALUES ARE IN MICROWATTS. VA AND SA ARE IN DEGREES.

FIGURE 223 CONT.

IR MEAN RADIANCE AS A FUNCTION OF SUN AZIMUTH

FILTER 3 AT 1320 AST INSOL ANGLE 43.9 DEG
SPECTRAL BAND 2.37 TO 2.80 MICRONS ELEVATION 30.5 KM

	VA	0	10	20	30	40	50	60	70	80	90
SA											
	R	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
130	A	0.	0.	0.	0.81	0.	0.	5.51	13.96	0.	0.
	L	0.	0.	0.	0.81	0.	0.	5.51	13.96	0.	0.
	R	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
140	A	0.	0.	0.	0.	0.	0.	2.51	3.70	0.	0.
	L	0.	0.	0.	0.	0.	0.	2.51	3.70	0.	0.
	R	0.	0.	0.	0.	0.	0.	6.17	15.23	0.	0.
150	A	0.	0.	0.	0.	0.	0.	1.55	5.65	0.	0.
	L	0.	0.	0.	0.	0.	0.	0.32	1.70	0.	0.
	R	0.	0.	0.	0.	0.	0.	4.48	13.37	0.	0.
160	A	0.	0.	0.	0.	0.	0.	2.38	10.77	0.	0.
	L	0.	0.	0.	0.	0.	0.	0.57	8.37	0.	0.
	R	0.	0.	0.	0.	0.	0.	1.95	16.69	0.	0.
170	A	0.	0.	0.	0.	0.	0.	1.28	13.35	0.	0.
	L	0.	0.	0.	0.	0.	0.	0.71	9.27	0.	0.
	R	0.	0.	0.	0.	0.	0.	0.87	15.13	0.	0.
180	A	0.	0.	0.	0.	0.	0.	0.64	16.51	0.	0.
	L	0.	0.	0.	0.	0.	0.	0.45	16.97	0.	0.

RADIANCE VALUES ARE IN MICROWATTS. VA AND SA ARE IN DEGREES.

FIGURE 223 CONT.

IR RMS FLUCTUATION AS A FUNCTION OF SUN AZIMUTH

FILTER 3 AT 1320 AST INSOL ANGLE 43.9 DEG
SPECTRAL BAND 2.37 TO 2.80 MICRONS ELEVATION 30.5 KM

VA	0	10	20	30	40	50	60	70	80	90
SA										
R	0.	0.	0.	0.	0.	3.80	0.	1.69	0.	0.
0 A	0.	0.	0.	0.	0.	5.85	0.	2.07	0.	0.
L	0.	0.	0.	0.	0.	4.45	0.	1.19	0.	0.
R	0.	0.	0.	0.	0.	3.05	0.	2.29	0.	0.
10 A	0.	0.	0.	0.	0.	5.44	0.	2.52	0.	0.
L	0.	0.	0.	0.	0.	4.51	0.	1.05	0.	0.
R	0.	0.	0.	0.	0.	1.72	0.	2.51	0.	0.
20 A	0.	0.	0.	0.	0.	1.72	0.	3.29	10.24	0.
L	0.	0.	0.	0.	0.	0.	0.	2.14	10.24	0.
R	0.	0.	0.	0.	1.62	3.13	0.	1.01	0.	0.
30 A	0.	0.	0.	0.	1.62	3.13	0.	1.01	0.	0.
L	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
R	0.	0.	0.	0.	0.	1.43	0.	1.22	0.	0.
40 A	0.	0.	0.	0.	0.	1.43	0.	1.22	0.	0.
L	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
R	0.	0.	0.	0.	0.	6.55	0.	3.00	0.	0.
50 A	0.	0.	0.	0.	0.	6.55	0.	3.00	0.	0.
L	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
R	0.	0.	0.	0.	0.	1.52	0.	4.95	0.	0.
60 A	0.	0.	0.	0.	0.	1.52	0.	6.77	0.	0.
L	0.	0.	0.	0.	0.	0.	0.	4.63	0.	0.

RADIANCE VALUES ARE IN MICROWATTS. VA AND SA ARE IN DEGREES.

FIGURE 224

IR RMS FLUCTUATION AS A FUNCTION OF SUN AZIMUTH

FILTER 3 AT 1320 AST INSOL ANGLE 43.9 DEG
SPECTRAL BAND 2.37 TO 2.80 MICRONS ELEVATION 30.5 KM

VA	0	10	20	30	40	50	60	70	80	90
SA										
R	0.	0.	0.	0.	0.	0.90	0.	4.23	0.	0.
70 A	0.	0.	0.	1.24	0.	0.90	1.84	7.29	0.	0.
L	0.	0.	0.	1.24	0.	0.	1.84	5.93	0.	0.
R	0.	0.	0.	0.	0.	0.44	0.	2.33	0.	0.
80 A	0.	0.	0.	1.39	0.	0.44	2.73	8.55	0.	0.
L	0.	0.	0.	1.39	0.	0.	2.73	8.23	0.	0.
R	0.	0.	0.	0.	0.	1.90	0.	0.89	0.	0.
90 A	0.	0.	0.	1.47	0.	1.90	1.74	7.60	0.	0.
L	0.	0.	0.	1.47	0.	0.	1.74	7.55	0.	0.
R	0.	0.	0.	0.	0.	4.10	0.	1.53	0.	0.
100 A	0.	0.	0.	1.38	0.	4.10	0.82	4.30	0.	0.
L	0.	0.	0.	1.38	0.	0.	0.82	4.02	0.	0.
R	0.	0.	0.	0.	0.	3.87	0.	0.72	0.	0.
110 A	0.	0.	0.	4.87	0.	3.87	0.51	3.67	0.	0.
L	0.	0.	0.	4.87	0.	0.	0.51	3.60	0.	0.
R	0.	0.	0.	0.	0.	1.89	0.	0.64	0.	0.
120 A	0.	0.	0.	1.57	0.	1.89	2.33	3.62	0.	0.
L	0.	0.	0.	1.57	0.	0.	2.33	3.56	0.	0.

RADIANCE VALUES ARE IN MICROWATTS. VA AND SA ARE IN DEGREES.

FIGURE 224 CONT.

IR RMS FLUCTUATION AS A FUNCTION OF SUN AZIMUTH

FILTER 3 AT 1320 AST INSOL ANGLE 43.9 DEG
SPECTRAL BAND 2.37 TO 2.80 MICRONS ELEVATION 30.5 KM

	VA	0	10	20	30	40	50	60	70	80	90
SA											
	R	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
130	A	0.	0.	0.	0.29	0.	0.	1.04	5.11	0.	0.
	L	0.	0.	0.	0.29	0.	0.	1.04	5.11	0.	0.
	R	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
140	A	0.	0.	0.	0.	0.	0.	1.71	3.32	0.	0.
	L	0.	0.	0.	0.	0.	0.	1.71	3.32	0.	0.
	R	0.	0.	0.	0.	0.	0.	2.07	0.99	0.	0.
150	A	0.	0.	0.	0.	0.	0.	2.11	2.74	0.	0.
	L	0.	0.	0.	0.	0.	0.	0.41	2.55	0.	0.
	R	0.	0.	0.	0.	0.	0.	3.31	1.56	0.	0.
160	A	0.	0.	0.	0.	0.	0.	3.36	2.91	0.	0.
	L	0.	0.	0.	0.	0.	0.	0.57	2.45	0.	0.
	R	0.	0.	0.	0.	0.	0.	1.88	4.15	0.	0.
170	A	0.	0.	0.	0.	0.	0.	1.97	6.32	0.	0.
	L	0.	0.	0.	0.	0.	0.	0.59	4.76	0.	0.
	R	0.	0.	0.	0.	0.	0.	0.20	0.85	0.	0.
180	A	0.	0.	0.	0.	0.	0.	0.29	3.20	0.	0.
	L	0.	0.	0.	0.	0.	0.	0.21	3.08	0.	0.

RADIANCE VALUES ARE IN MICROWATTS. VA AND SA ARE IN DEGREES.

FIGURE 224 CONT.

IR NUMBER OF OBSERVATIONS AS A FUNCTION OF SCATTERING ANGLE

FILTER 3 AT 1320 AST INSOL ANGLE 43.9 DEG
SPECTRAL BAND 2.37 TO 2.80 MICRONS ELEVATION 30.5 KM

SA	VA	0	10	20	30	40	50	60	70	80	90
0		0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
10		0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
20		0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
30		0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
40		0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
50		0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
60		0.	0.	0.	0.	0.	0.	0.	900.	21.	0.
70		0.	0.	0.	0.	0.	0.	0.	495.	0.	0.
80		0.	0.	0.	0.	0.	0.	0.	312.	0.	0.
90		0.	0.	0.	0.	0.	788.	0.	592.	0.	0.
100		0.	0.	0.	0.	29.	486.	225.	605.	0.	0.
110		0.	0.	0.	0.	0.	405.	315.	553.	0.	0.
120		0.	0.	0.	149.	0.	345.	285.	408.	0.	0.
130		0.	0.	0.	463.	0.	320.	345.	253.	0.	0.
140		0.	0.	0.	387.	0.	150.	285.	344.	0.	0.
150		0.	0.	0.	180.	0.	0.	270.	1073.	0.	0.
160		0.	0.	0.	0.	0.	0.	735.	0.	0.	0.
170		0.	0.	0.	0.	0.	0.	375.	0.	0.	0.
180		0.	0.	0.	0.	0.	0.	0.	0.	0.	0.

RADIANCE VALUES ARE IN MICROWATTS. VA AND SA ARE IN DEGREES.

FIGURE 225

IR MEAN RADIANCE AS A FUNCTION OF SCATTERING ANGLE

FILTER 3 AT 1320 AST INSOL ANGLE 43.9 DEG
SPECTRAL BAND 2.37 TO 2.80 MICRONS ELEVATION 30.5 KM

VA	0	10	20	30	40	50	60	70	80	90
SA										
0	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
10	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
20	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
30	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
40	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
50	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
60	0.	0.	0.	0.	0.	0.	0.	34.82	31.90	0.
70	0.	0.	0.	0.	0.	0.	0.	37.77	0.	0.
80	0.	0.	0.	0.	0.	0.	0.	22.01	0.	0.
90	0.	0.	0.	0.	0.	3.87	0.	26.02	0.	0.
100	0.	0.	0.	0.	13.22	4.38	2.33	23.34	0.	0.
110	0.	0.	0.	0.	0.	5.05	4.64	18.17	0.	0.
120	0.	0.	0.	1.74	0.	8.18	1.47	15.61	0.	0.
130	0.	0.	0.	1.68	0.	7.35	0.96	16.07	0.	0.
140	0.	0.	0.	2.96	0.	4.06	5.54	2.67	0.	0.
150	0.	0.	0.	0.81	0.	0.	0.95	12.26	0.	0.
160	0.	0.	0.	0.	0.	0.	2.22	0.	0.	0.
170	0.	0.	0.	0.	0.	0.	0.81	0.	0.	0.
180	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.

RADIANCE VALUES ARE IN MICROWATTS. VA AND SA ARE IN DEGREES.

FIGURE 226

IR RMS FLUCTUATION AS A FUNCTION OF SCATTERING ANGLE

FILTER 3 AT 1320 AST INSOL ANGLE 43.9 DEG
SPECTRAL BAND 2.37 TO 2.80 MICRONS ELEVATION 30.5 KM

VA	0	10	20	30	40	50	60	70	80	90
SA										
0	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
10	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
20	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
30	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
40	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
50	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
60	0.	0.	0.	0.	0.	0.	0.	2.44	10.24	0.
70	0.	0.	0.	0.	0.	0.	0.	2.31	0.	0.
80	0.	0.	0.	0.	0.	0.	0.	7.06	0.	0.
90	0.	0.	0.	0.	0.	4.27	0.	11.46	0.	0.
100	0.	0.	0.	0.	1.62	5.12	2.52	7.78	0.	0.
110	0.	0.	0.	0.	0.	1.03	2.61	3.04	0.	0.
120	0.	0.	0.	1.40	0.	3.10	1.21	3.15	0.	0.
130	0.	0.	0.	1.73	0.	3.64	1.12	4.03	0.	0.
140	0.	0.	0.	3.74	0.	1.78	1.06	3.02	0.	0.
150	0.	0.	0.	0.29	0.	0.	1.01	5.21	0.	0.
160	0.	0.	0.	0.	0.	0.	2.84	0.	0.	0.
170	0.	0.	0.	0.	0.	0.	0.43	0.	0.	0.
180	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.

RADIANCE VALUES ARE IN MICROWATTS. VA AND SA ARE IN DEGREES.

FIGURE 227

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